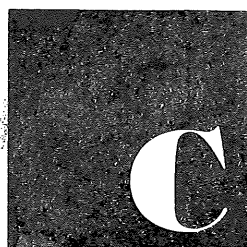


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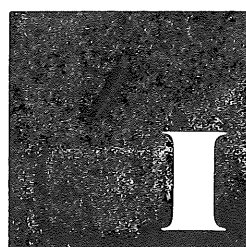
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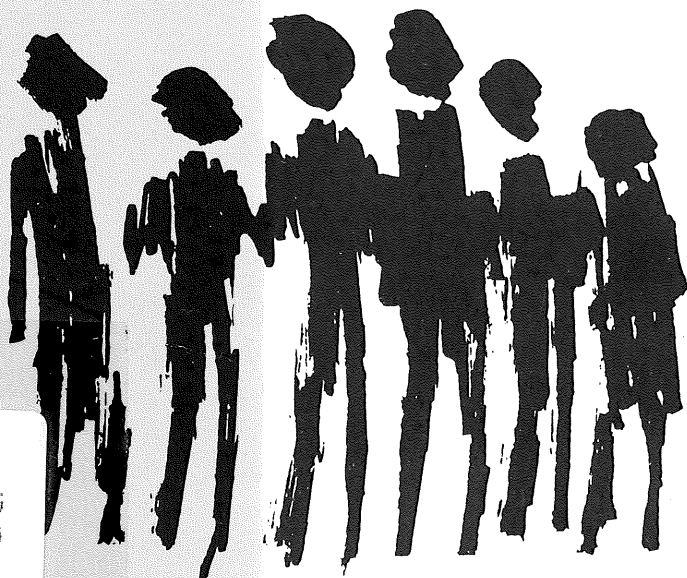
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System

Short-Term Training Programs

State of Minnesota
Department of Education



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SHORT-TERM TRAINING PROGRAMS
(Two Years or Less)

MINNESOTA CAREER INFORMATION SYSTEM

635 Capitol Square Building
550 Cedar Street
St. Paul, Minnesota 55101

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INTRODUCTION

Short-term training programs meet a special need in today's economy. Although program goals vary, most are designed to enable people to enter or re-enter the job market quickly. Some programs help employed people to keep pace with changing technology in their present jobs or to advance in their fields. Other programs allow people to learn a skill or body of knowledge of personal interest and are not related to a specific occupation.

CONTENTS

This book describes training programs that can be completed in twenty-four months or less. Competency-based programs and those with options which allow a student to obtain a certificate or diploma in one year or less (such as complete programs in hair design/cosmetology/manicuring) are also included. Most can be entered without previous college work; a limited number of graduate-level programs are included.

NOTE: The phrases, "one-year" or "two years", are typically used to describe nine-month or eighteen-month community college programs. "One-year (four terms)" or "12 months" is used to describe programs that take a full calendar year to complete, like those at most AVTIs.

Programs listed in the book are all available to the general public at schools that are accredited or licensed by regional or national associations. Programs offered by or for a specific employer, equipment dealer, or professional association are omitted.

FORMAT

Each program of study is divided into several sections. The first section contains a general description of the field of study. Information on the intent of the programs, program length, typical course work, and admission and graduation requirements is given. Lists of related occupations and related programs of study are also included.

The second section lists schools that offer training in the field of study. The program title used by the school is followed by a brief description of their program, certificates or diplomas given for completing the training, and cost information. The school's MCIS number is listed along with its name for use in locating additional information on specific schools in the MCIS volumes titled "Minnesota Post-Secondary Schools," Volumes I & II.

PURPOSE

The purpose of this book is to make information on short-term programs readily available to people who can spend only a short time training or retraining for a vocation. If there are no short-term programs in a specific field, such as chemistry, all program information has been omitted from this volume. Those interested in longer term training programs should consult the MCIS volume titled "Programs of Study and Training in Minnesota." It describes programs of all lengths including two-year associate, four- and five-year bachelor's, and graduate level programs of varying lengths.

Information about the programs of study is completely updated prior to printing this volume. The program information is collected directly from the institutions.

HOW TO USE THIS BOOK

Look up the programs by program number. You can find program numbers in the list which begins on the following page. Short-term training programs will be marked with an asterisk.

Information about financial aid programs begins on page LX.

For additional information about Minnesota schools, see the MCIS volumes titled Minnesota Post-Secondary Schools Volumes I and II.

Minnesota Career Information System (MCIS)
State Department of Education
635 Capitol Square Building
550 Cedar Street
St. Paul, Minnesota 55101

INDEX TO SHORT TERM TRAINING PROGRAMS

The training programs are indexed below according to their two digit instructional clusters. The page location of training programs can usually be found by matching the first two digits of the three digit program code with the two digits of the instructional cluster. For example, 112 Animal Science, can be found under cluster 11 Agriculture and Natural Resources. All of the training programs under this area start on page 10.

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*These programs of study are long-term (more than twenty-four months) and are described in the MCIS volume titled "Programs of Study & Training in Minnesota."

PROGRAMS OF STUDY

This book contains information on educational and training programs that can be completed in twenty-four months or less. These programs are available in Minnesota to the general public at schools that are accredited or licensed by regional or national associations. Most are intended to prepare people for employment, some are not.

The list of programs of study that follow include short- and long-term programs. The long-term programs of study are described in the MCIS volume titled "Programs of Study & Training in Minnesota."

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 - 298 Precision Production Work
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- Millwright (see 287 Industrial Mechanics)
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 - 529 Physics
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 - 383 Medical Laboratory Technologies
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- Social Science Programs, see:
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 - 583 Economics
 - 581 General Social Science
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- Surveying (see 253 Engineering Technologies)
- Systems Analysis (see 211 Computer and Information Science or 214 Data Processing)
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- Telephone Communications
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- Telephone Service Technology
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- Television Repair (see 292 Electricity and Electronics Repair)
- Teller Training (see 143 Banking and Finance)
- 395 Textiles and Clothing
- Theater (see 316 Dramatic Arts)
- 595 Theology
- Therapy (see 367 Rehabilitation Services)
- Tool and Die Making (see 295 Metalworking)
- Tourism (see 146 Marketing and Sales)
- Transportation Clerk Training
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- Travel Services Marketing
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- Tree Trimming (see 118 Forestry and Natural Resources)
- Truck/Diesel Mechanics (see 278 Gas and Diesel Mechanics)
- Truck Driving (see 271 Vehicle and Equipment Operation)
- Typing (see 158 Secretarial Studies and Office Administration)
- 223 Upholstering and Leatherworking
- Urban Planning (see 131 Architecture and Environmental Design or 562 Public Administration)
- Urban Studies (see 586 Political Science)
- 271 Vehicle and Equipment Operation
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- Vending Merchandising (see 146 Marketing and Sales)
- Veteran Farm Management (see 116 Agricultural Business and Management)
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- Welding (see 295 Metalworking)
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- Women's Studies (see 587 Sociology)
- Wood Furniture Finishing (see 289 Woodworking)
- 289 Woodworking
- Word Processing Technology
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111 Agricultural Production and Services

- *25002 Alexandria AVTI
- *25003 Anoka AVTI
- *25004 Austin AVTI
- *25007 Canby AVTI
- *25015 Hutchinson AVTI
- *25016 Jackson AVTI
- *25017 Mankato AVTI
- *25019 Moorhead AVTI
- *25020 Pine Technical Institute
- *25021 Pipestone AVTI
- *25024 Saint Cloud AVTI
- *25026 Staples AVTI
- *25027 Hennepin Technical Centers
- *25028 Thief River Falls AVTI
- *25030 Willmar AVTI
- *25031 Winona AVTI
- *25032 East Grand Forks AVTI
- *25033 Red Wing AVTI
- *27139 Austin Community College
- *27146 Worthington Community College
- 81002 University of Minnesota (Twin Cities)
- *81004 University of Minnesota - Crookston Technical College
- *81005 University of Minnesota - Waseca Technical College

112 Animal Sciences

- *25015 Hutchinson AVTI
- *25027 Hennepin Technical Centers
- 81002 University of Minnesota (Twin Cities)
- *81004 University of Minnesota - Crookston Technical College

113 Soil and Plant Sciences

- *25016 Jackson AVTI
- 81002 University of Minnesota (Twin Cities)
- *81004 University of Minnesota - Crookston Technical College
- *81005 University of Minnesota - Waseca Technical College

114 Food Science and Technology

- 81002 University of Minnesota (Twin Cities)
- *81005 University of Minnesota - Waseca Technical College
- 84017 College of Saint Catherine

115 Horticulture and Landscaping

- *25003 Anoka AVTI
- *25006 Brainerd AVTI
- *25008 Dakota County AVTI
- *25010 Duluth AVTI
- *25022 916 AVTI
- *25023 Rochester AVTI
- *25027 Hennepin Technical Centers
- 81002 University of Minnesota (Twin Cities)

115 Horticulture and Landscaping (Cont.)

- *81004 University of Minnesota - Crookston Technical College
- *81005 University of Minnesota - Waseca Technical College

116 Agricultural Business and Management

- *26175 Southwest State University
- 81002 University of Minnesota (Twin Cities)
- *81004 University of Minnesota - Crookston Technical College
- *81005 University of Minnesota - Waseca Technical College

118 Forestry and Natural Resources

- *25006 Brainerd AVTI
- *25009 Detroit Lakes AVTI
- *25026 Staples AVTI
- *26073 Saint Cloud AVTI
- *27147 Vermillion Community College
- 81002 University of Minnesota (Twin Cities)
- *81004 University of Minnesota - Crookston Technical College
- 84005 Concordia College (Saint Paul)
- 84008 Hamline University
- 84010 Macalester College

119 Forest Products

- *25010 Duluth AVTI
- *27144 Itasca Community College
- 81002 University of Minnesota (Twin Cities)

121 Fisheries and Wildlife Sciences

- 81002 University of Minnesota (Twin Cities)

122 Marine Technology

- *25002 Alexandria AVTI
- *25009 Detroit Lakes AVTI

131 Architecture and Environmental Design

- *25002 Alexandria AVTI
- *25008 Dakota County AVTI
- 81002 University of Minnesota (Twin Cities)
- 84011 Minneapolis College of Art and Design

143 Banking and Finance

- *25004 Austin AVTI
- *25006 Brainerd AVTI
- *25021 Pipestone AVTI
- *25022 916 AVTI
- *25023 Rochester AVTI
- *25032 East Grand Forks AVTI

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- *25002 Alexandria AVTI
- *25003 Anoka AVTI
- *25004 Austin AVTI
- *25007 Canby AVTI
- *25015 Hutchinson AVTI
- *25016 Jackson AVTI
- *25017 Mankato AVTI
- *25019 Moorhead AVTI
- *25020 Pine Technical Institute
- *25021 Pipestone AVTI
- *25024 Saint Cloud AVTI
- *25026 Staples AVTI
- *25027 Hennepin Technical Centers
- *25028 Thief River Falls AVTI
- *25030 Willmar AVTI
- *25031 Winona AVTI
- *25032 East Grand Forks AVTI
- *25033 Red Wing AVTI
- *27139 Austin Community College
- *27146 Worthington Community College
- 81002 University of Minnesota (Twin Cities)
- *81004 University of Minnesota - Crookston Technical College
- *81005 University of Minnesota - Waseca Technical College

112 Animal Sciences

- *25015 Hutchinson AVTI
- *25027 Hennepin Technical Centers
- 81002 University of Minnesota (Twin Cities)
- *81004 University of Minnesota - Crookston Technical College

113 Soil and Plant Sciences

- *25016 Jackson AVTI
- 81002 University of Minnesota (Twin Cities)
- *81004 University of Minnesota - Crookston Technical College
- *81005 University of Minnesota - Waseca Technical College

114 Food Science and Technology

- 81002 University of Minnesota (Twin Cities)
- *81005 University of Minnesota - Waseca Technical College
- 84017 College of Saint Catherine

115 Horticulture and Landscaping

- *25003 Anoka AVTI
- *25006 Brainerd AVTI
- *25008 Dakota County AVTI
- *25010 Duluth AVTI
- *25022 916 AVTI
- *25023 Rochester AVTI
- *25027 Hennepin Technical Centers
- 81002 University of Minnesota (Twin Cities)

115 Horticulture and Landscaping (Cont.)

- *81004 University of Minnesota - Crookston Technical College
- *81005 University of Minnesota - Waseca Technical College

116 Agricultural Business and Management

- *26175 Southwest State University
- 81002 University of Minnesota (Twin Cities)
- *81004 University of Minnesota - Crookston Technical College
- *81005 University of Minnesota - Waseca Technical College

118 Forestry and Natural Resources

- *25006 Brainerd AVTI
- *25009 Detroit Lakes AVTI
- *25026 Staples AVTI
- *26073 Saint Cloud AVTI
- *27147 Vermillion Community College
- 81002 University of Minnesota (Twin Cities)
- *81004 University of Minnesota - Crookston Technical College
- 84005 Concordia College (Saint Paul)
- 84008 Hamline University
- 84010 Macalester College

119 Forest Products

- *25010 Duluth AVTI
- *27144 Itasca Community College
- 81002 University of Minnesota (Twin Cities)

121 Fisheries and Wildlife Sciences

- 81002 University of Minnesota (Twin Cities)

122 Marine Technology

- *25002 Alexandria AVTI
- *25009 Detroit Lakes AVTI

131 Architecture and Environmental Design

- *25002 Alexandria AVTI
- *25008 Dakota County AVTI
- 81002 University of Minnesota (Twin Cities)
- 84011 Minneapolis College of Art and Design

143 Banking and Finance

- *25004 Austin AVTI
- *25006 Brainerd AVTI
- *25021 Pipestone AVTI
- *25022 916 AVTI
- *25023 Rochester AVTI
- *25032 East Grand Forks AVTI

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

143 Banking and Finance (Cont.)

- *25033 Red Wing AVTI
- 26073 Saint Cloud State University
- 26176 Metropolitan State University
- *27157 Inver Hills Community College

145 Business Management and Administration

- *25002 Alexandria AVTI
- *25005 Bemidji AVTI
- *25008 Dakota County AVTI
- *25009 Detroit Lakes AVTI
- *25018 Minneapolis Technical Institute
- *26070 Bemidji State University
- 26071 Mankato State University
- *26072 Moorhead State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- *26175 Southwest State University
- 26176 Metropolitan State University
- *27142 Fergus Falls Community College
- *27146 Worthington Community College
- *27148 Rochester Community College
- *27149 Northland Community College
- *27153 North Hennepin Community College
- *27154 Lakewood Community College
- *27156 Normandale Community College
- *27157 Inver Hills Community College
- 81001 University of Minnesota (Duluth)
- *81002 University of Minnesota (Twin Cities)
- 81003 University of Minnesota (Morris)
- *81004 University of Minnesota - Crookston Technical College
- *82027 Minnesota School of Business
- *82039 Saint Cloud Business College
- 84001 Augsburg College
- 84002 Bethel College and Seminary
- 84004 Concordia College (Moorhead)
- 84005 Concordia College (Saint Paul)
- 84007 Gustavus Adolphus College
- 84008 Hamline University
- 84016 College of Saint Benedict
- 84017 College of Saint Catherine
- 84018 Saint John's University
- 84019 Saint Mary's College
- 84022 College of Saint Scholastica
- 84023 College of Saint Teresa
- 84024 College of Saint Thomas

146 Marketing and Sales

- *25001 Albert Lea AVTI
- *25002 Alexandria AVTI
- *25003 Anoka AVTI
- *25004 Austin AVTI
- *25005 Bemidji AVTI
- *25006 Brainerd AVTI
- *25008 Dakota County AVTI
- *25009 Detroit Lakes AVTI
- *25010 Duluth AVTI
- *25012 Faribault AVTI
- *25013 Granite Falls AVTI
- *25014 Hibbing AVTI
- *25015 Hutchinson AVTI
- *25016 Jackson AVTI

146 Marketing and Sales (Cont.)

- *25017 Mankato AVTI
- *25018 Minneapolis Technical Institute
- *25019 Moorhead AVTI
- *25020 Pine Technical Institute
- *25021 Pipestone AVTI
- *25022 916 AVTI
- *25024 Saint Cloud AVTI
- *25027 Hennepin Technical Centers
- *25028 Thief River Falls AVTI
- *25029 Wadena AVTI
- *25030 Willmar AVTI
- *25031 Winona AVTI
- *25032 East Grand Forks AVTI
- *26072 Moorhead State University
- 26073 Saint Cloud State University
- *26175 Southwest State University
- 26176 Metropolitan State University
- *27139 Austin Community College
- *27142 Fergus Falls Community College
- *27144 Itasca Community College
- *27148 Rochester Community College
- *27150 Mesabi Community College
- *27152 Anoka-Ramsey Community College
- *27153 North Hennepin Community College
- *27154 Lakewood Community College
- *27156 Normandale Community College
- *27157 Inver Hills Community College
- *81002 University of Minnesota (Twin Cities)
- *81004 University of Minnesota - Crookston Technical College
- *81005 University of Minnesota - Waseca Technical College
- *82014 Globe College of Business
- *82027 Minnesota School of Business
- *82030 Northern Technical School of Business
- *82035 Lowthian College
- *82038 Rasmussen Business College
- *82083 Security Schools, Inc.
- 84019 Saint Mary's College

147 Real Estate

- *25024 Saint Cloud AVTI
- 26073 Saint Cloud State University
- 26176 Metropolitan State University
- *27157 Inver Hills Community College
- *82028 Minnesota School of Real Estate, Inc.
- *82083 Security Schools, Inc.

148 Insurance

157 Accounting

- *25001 Albert Lea AVTI
- *25002 Alexandria AVTI
- *25004 Austin AVTI
- *25005 Bemidji AVTI
- *25006 Brainerd AVTI
- *25007 Canby AVTI
- *25008 Dakota County AVTI
- *25009 Detroit Lakes AVTI

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157 Accounting (Cont.)

- *25010 Duluth AVTI
- *25011 Eveleth AVTI
- *25012 Faribault AVTI
- *25013 Granite Falls AVTI
- *25016 Jackson AVTI
- *25017 Mankato AVTI
- *25018 Minneapolis Technical Institute
- *25019 Moorhead AVTI
- *25020 Pine Technical Institute
- *25021 Pipestone AVTI
- *25022 916 AVTI
- *25023 Rochester AVTI
- *25024 Saint Cloud AVTI
- *25025 Saint Paul AVTI
- *25027 Hennepin Technical Centers
- *25028 Thief River Falls AVTI
- *25029 Wadena AVTI
- *25030 Willmar AVTI
- *26070 Bemidji State University
- 26071 Mankato State University
- *26072 Moorhead State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- *26175 Southwest State University
- 26176 Metropolitan State University
- *27142 Fergus Falls Community College
- *27144 Itasca Community College
- *27147 Vermillion Community College
- *27152 Anoka-Ramsey Community College
- *27153 North Hennepin Community College
- *27154 Lakewood Community College
- *27155 Rainy River Community College
- *27156 Normandale Community College
- *27157 Inver Hills Community College
- 81001 University of Minnesota (Duluth)
- *81002 University of Minnesota (Twin Cities)
- *81004 University of Minnesota - Crookston Technical College
- *82001 Academy of Accountancy
- *82008 Duluth Business University
- *82014 Globe College of Business
- *82015 H & R Block, Inc.
- *82023 Minneapolis Business College
- *82027 Minnesota School of Business
- *82030 Northern Technical School of Business
- *82038 Rasmussen Business College
- *82039 Saint Cloud Business College
- 84004 Concordia College (Moorhead)
- 84007 Gustavus Adolphus College
- 84016 College of Saint Benedict
- 84018 Saint John's University
- 84019 Saint Mary's College
- 84023 College of Saint Teresa

158 Secretarial Studies and Office Administration

- *25001 Albert Lea AVTI
- *25002 Alexandria AVTI
- *25003 Anoka AVTI
- *25004 Austin AVTI
- *25005 Bemidji AVTI
- *25006 Brainerd AVTI
- *25007 Canby AVTI
- *25008 Dakota County AVTI
- *25009 Detroit Lakes AVTI

158 Secretarial Studies and Office Administration (Cont.)

- *25010 Duluth AVTI
- *25011 Eveleth AVTI
- *25012 Faribault AVTI
- *25013 Granite Falls AVTI
- *25015 Hutchinson AVTI
- *25016 Jackson AVTI
- *25017 Mankato AVTI
- *25018 Minneapolis Technical Institute
- *25019 Moorhead AVTI
- *25020 Pine Technical Institute
- *25022 916 AVTI
- *25023 Rochester AVTI
- *25024 Saint Cloud AVTI
- *25025 Saint Paul AVTI
- *25026 Staples AVTI
- *25027 Hennepin Technical Centers
- *25028 Thief River Falls AVTI
- *25029 Wadena AVTI
- *25030 Willmar AVTI
- *25031 Winona AVTI
- *25032 East Grand Forks AVTI
- *25033 Red Wing AVTI
- *26070 Bemidji State University
- *26071 Mankato State University
- 26072 Moorhead State University
- *26073 Saint Cloud State University
- *26074 Winona State University
- *26175 Southwest State University
- *27139 Austin Community College
- *27142 Fergus Falls Community College
- *27143 Hibbing Community College
- *27144 Itasca Community College
- *27146 Worthington Community College
- *27147 Vermillion Community College
- *27148 Rochester Community College
- *27150 Mesabi Community College
- *27152 Anoka-Ramsey Community College
- *27153 North Hennepin Community College
- *27154 Lakewood Community College
- *27155 Rainy River Community College
- *27156 Normandale Community College
- *27157 Inver Hills Community College
- *81004 University of Minnesota - Crookston Technical College
- *81005 University of Minnesota - Waseca Technical College
- *82008 Duluth Business University
- *82014 Globe College of Business
- *82021 McConnel School
- *82023 Minneapolis Business College
- *82025 Minnesota Institute of Medical and Dental Assisting
- *82027 Minnesota School of Business
- *82030 Northern Technical School of Business
- *82038 Rasmussen Business College
- *82039 Saint Cloud Business College
- *82042 Stratford School
- *82082 John Robert Powers Modeling and Career School
- *83001 Bethany Lutheran Junior College
- *83003 Golden Valley Lutheran College
- 84004 Concordia College (Moorhead)
- 84007 Gustavus Adolphus College
- *84014 Northwestern College
- *84015 Pillsbury Baptist Bible College

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

161 Hotel and Motel Management

- *25002 Alexandria AVTI
- 26072 Moorhead State University
- 26175 Southwest State University
- *27156 Normandale Community College
- *81004 University of Minnesota - Crookston
Technical College

162 Health Care Administration

- 26175 Southwest State University
- *27157 Inver Hills Community College
- 84004 Concordia College (Moorhead)
- 84019 Saint Mary's College

163 Medical Records Administration

- *25003 Anoka AVTI
- *25019 Moorhead AVTI
- *25023 Rochester AVTI
- *25025 Saint Paul AVTI
- *25027 Hennepin Technical Centers
- *25032 East Grand Forks AVTI
- *27152 Anoka-Ramsey Community College
- *27153 North Hennepin Community College
- *81037 Lakeland Medical-Dental Academy
- *83004 Saint Mary's Junior College
- 84022 College of Saint Scholastica

193 Journalism and Communications

- *25024 Saint Cloud AVTI
- *25025 Saint Paul AVTI
- *25029 Wadena AVTI
- 26070 Bemidji State University
- 26071 Mankato State University
- 26072 Moorhead State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- 26176 Metropolitan State University
- *27148 Rochester Community College
- 81001 University of Minnesota (Duluth)
- 81002 University of Minnesota (Twin
Cities)
- *81004 University of Minnesota - Crookston
Technical College
- *81005 University of Minnesota - Waseca
Technical College
- *82005 Brown Institute
- 84001 Augsburg College
- 84004 Concordia College (Moorhead)
- *84014 Northwestern College
- 84017 College of Saint Catherine
- 84019 Saint Mary's College
- 84021 Saint Paul Bible College
- 84022 College of Saint Scholastica
- 84023 College of Saint Teresa
- 84024 College of Saint Thomas

196 Communication Technologies

- *25004 Austin AVTI
- *25010 Duluth AVTI
- *25016 Jackson AVTI
- *25022 916 AVTI
- *25027 Hennepin Technical Centers

Communication Technologies (Cont.)

- *25028 Thief River Falls AVTI
- *26073 Saint Cloud State University
- 26175 Southwest State University
- 26176 Metropolitan State University
- 81002 University of Minnesota (Twin
Cities)
- *82087 School of Communication Arts
- 84023 College of Saint Teresa

211 Computer and Information Science

- 26070 Bemidji State University
- 26071 Mankato State University
- 26072 Moorhead State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- 81001 University of Minnesota (Duluth)
- *81002 University of Minnesota (Twin
Cities)
- 84002 Bethel College and Seminary
- 84007 Gustavus Adolphus College
- 84010 Macalester College
- 84016 College of Saint Benedict
- 84017 College of Saint Catherine
- 84018 Saint John's University
- 84019 Saint Mary's College
- 84020 Saint Olaf College
- 84023 College of Saint Teresa
- 84024 College of Saint Thomas

214 Data Processing

- *25002 Alexandria AVTI
- *25008 Dakota County AVTI
- *25010 Duluth AVTI
- *25017 Mankato AVTI
- *25018 Minneapolis Technical Institute
- *25019 Moorhead AVTI
- *25020 Pine Technical Institute
- *25022 916 AVTI
- *25024 Saint Cloud AVTI
- *25025 Saint Paul AVTI
- *25027 Hennepin Technical Centers
- *25033 Red Wing AVTI
- 26176 Metropolitan State University
- *27154 Lakewood Community College
- *27156 Normandale Community College
- *81004 University of Minnesota - Crookston
Technical College
- *82006 Control Data Institute
- *82014 Globe College of Business
- *82027 Minnesota School of Business
- *82030 Northern Technical School of
Business
- *82038 Rasmussen Business College
- *83003 Golden Valley Lutheran College
- *83004 Saint Mary's Junior College
- 84004 Concordia College (Moorhead)

221 Floral Design

- *25006 Brainerd AVTI
- *25027 Hennepin Technical Centers

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

223 Upholstering and Leatherworking

- *25018 Minneapolis Technical Institute
- *25022 916 AVTI

224 Animal Grooming and Training

- *81004 University of Minnesota - Crookston Technical College

226 Custodial Services

- *25006 Brainerd AVTI
- *25012 Faribault AVTI
- *25022 916 AVTI
- *81004 University of Minnesota - Crookston Technical College

227 Personal Services

- *82064 Model College of Hair Design
- *82075 Saint Cloud Beauty College

228 Hair Design

- *25004 Austin AVTI
- *25018 Minneapolis Technical Institute
- *25022 916 AVTI
- *25025 Saint Paul AVTI
- *25027 Hennepin Technical Centers
- *25028 Thief River Falls AVTI
- *25029 Wadena AVTI
- *25030 Willmar AVTI
- *25031 Winona AVTI
- *82048 Cosmetology Training Centers LTD (St. Paul)
- *82049 Arrowhead Beauty College
- *82051 Brooks Beauty College
- *82052 Brooks School of Barbering
- *82054 Michael's School of Cosmetology
- *82055 Duluth Academy of Hair Design
- *82056 Florian School of Cosmetology
- *82057 Glamour Beauty Academy
- *82058 Hibbing Beauty College
- *82059 Minnesota Beauty College
- *82060 Cosmetology Training Center (Mankato)
- *82061 Maxims Beauty Academy
- *82062 Hastings College of Hair Design
- *82063 Cosmetology Training Center LTD (Minneapolis)
- *82064 Model College of Hair Design
- *82065 Moler Barber School
- *82066 Oliver Theln Beauty School
- *82068 Cosmetology Training Center (Faribault)
- *82069 Ritter-Fergus Falls School of Beauty
- *82070 Richfield Beauty School
- *82071 Rita's Moorhead School of Beauty
- *82072 Ritter-Saint Paul Beauty College
- *82073 Robinson's Beauty College
- *82074 Cosmetology Training Centers LTD (Rochester)
- *82075 Saint Cloud Beauty College
- *82076 Hairdresser's Educational Center
- *82077 Fern's Beauty School

228 Hair Design (Cont.)

- *82078 Vera Slater Beauty School
- *82079 Virginia School of Beauty Culture, Inc.
- *82080 Horst Education Center for Cosmetology
- *82085 Saint Paul Barber School
- *82086 Scot-Lewis Florian Scientific School of Cosmetology

229 Funeral Services

- 81002 University of Minnesota (Twin Cities)

231 Education Administration

- 26070 Bemidji State University
- 26071 Mankato State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- 81001 University of Minnesota (Duluth)
- 81002 University of Minnesota (Twin Cities)
- 84005 Concordia College (Saint Paul)
- 84019 Saint Mary's College
- 84024 College of Saint Thomas

234 Early Childhood and Elementary Education

- 26070 Bemidji State University
- 26071 Mankato State University
- 26072 Moorhead State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- 26175 Southwest State University
- 81001 University of Minnesota (Duluth)
- 81002 University of Minnesota (Twin Cities)
- 81003 University of Minnesota (Morris)
- 84001 Augsburg College
- 84002 Bethel College and Seminary
- 84004 Concordia College (Moorhead)
- 84005 Concordia College (Saint Paul)
- 84006 Dr. Martin Luther College
- 84007 Gustavus Adolphus College
- 84008 Hamline University
- 84010 Macalester College
- 84014 Northwestern College
- 84015 Pillsbury Baptist Bible College
- 84016 College of Saint Benedict
- 84017 College of Saint Catherine
- 84018 Saint John's University
- 84021 Saint Paul Bible College
- 84022 College of Saint Scholastica
- 84023 College of Saint Teresa
- 84024 College of Saint Thomas

235 Health and Physical Education

- 26070 Bemidji State University
- 26071 Mankato State University
- 26072 Moorhead State University
- *26073 Saint Cloud State University
- 26074 Winona State University
- 26175 Southwest State University

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

235 Health and Physical Education (Cont.)

26176 Metropolitan State University
 81001 University of Minnesota (Duluth)
 81002 University of Minnesota (Twin Cities)
 81003 University of Minnesota (Morris)
 84001 Augsburg College
 84002 Bethel College and Seminary
 84004 Concordia College (Moorhead)
 84005 Concordia College (Saint Paul)
 84007 Gustavus Adolphus College
 84008 Hamline University
 84014 Northwestern College
 84015 Pillsbury Baptist Bible College
 84017 College of Saint Catherine
 84020 Saint Olaf College
 84024 College of Saint Thomas

236 Secondary Education

26070 Bemidji State University
 26071 Mankato State University
 26072 Moorhead State University
 26073 Saint Cloud State University
 26074 Winona State University
 26175 Southwest State University
 81001 University of Minnesota (Duluth)
 81002 University of Minnesota (Twin Cities)
 81003 University of Minnesota (Morris)
 *81004 University of Minnesota - Crookston Technical College
 84001 Augsburg College
 84002 Bethel College and Seminary
 84003 Carleton College
 84004 Concordia College (Moorhead)
 84005 Concordia College (Saint Paul)
 84007 Gustavus Adolphus College
 84008 Hamline University
 84010 Macalester College
 84015 Pillsbury Baptist Bible College
 84016 College of Saint Benedict
 84017 College of Saint Catherine
 84018 Saint John's University
 84019 Saint Mary's College
 84020 Saint Olaf College
 84022 College of Saint Scholastica
 84023 College of Saint Teresa
 84024 College of Saint Thomas

237 Special Education

26071 Mankato State University
 26072 Moorhead State University
 26073 Saint Cloud State University
 26074 Winona State University
 81001 University of Minnesota (Duluth)
 81002 University of Minnesota (Twin Cities)
 *83004 Saint Mary's Junior College
 84007 Gustavus Adolphus College
 84019 Saint Mary's College
 84023 College of Saint Teresa
 84024 College of Saint Thomas

238 Counseling

26071 Mankato State University
 26072 Moorhead State University
 26073 Saint Cloud State University
 26074 Winona State University
 *27144 Itasca Community College
 *27151 Minneapolis Community College
 *27154 Lakewood Community College
 *81001 University of Minnesota (Duluth)
 *81002 University of Minnesota (Twin Cities)
 *81005 University of Minnesota - Waseca Technical College
 *83004 Saint Mary's Junior College
 84019 Saint Mary's College
 84024 College of Saint Thomas

251 Engineering

26073 Saint Cloud State University
 81002 University of Minnesota (Twin Cities)
 84007 Gustavus Adolphus College
 84008 Hamline University
 84010 Macalester College
 84016 College of Saint Benedict
 84018 Saint John's University
 84020 Saint Olaf College
 84022 College of Saint Scholastica
 84023 College of Saint Teresa

253 Engineering Technologies

*25002 Alexandria AVTI
 *25003 Anoka AVTI
 *25004 Austin AVTI
 *25008 Dakota County AVTI
 *25010 Duluth AVTI
 *25012 Faribault AVTI
 *25013 Granite Falls AVTI
 *25014 Hibbing AVTI
 *25015 Hutchinson AVTI
 *25016 Jackson AVTI
 *25017 Mankato AVTI
 *25018 Minneapolis Technical Institute
 *25019 Moorhead AVTI
 *25022 916 AVTI
 *25023 Rochester AVTI
 *25024 Saint Cloud AVTI
 *25025 Saint Paul AVTI
 *25027 Hennepin Technical Centers
 *25028 Thief River Falls AVTI
 *25029 Wadena AVTI
 *25030 Willmar AVTI
 *25033 Red Wing AVTI
 *26071 Mankato State University
 *26072 Moorhead State University
 *26073 Saint Cloud State University
 *26175 Southwest State University
 *27147 Vermillion Community College
 *27148 Rochester Community College
 *27152 Anoka-Ramsey Community College
 *27153 North Hennepin Community College
 *27156 Normandale Community College
 *27157 Inver Hills Community College
 81001 University of Minnesota (Duluth)
 *81002 University of Minnesota (Twin Cities)

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

253 Engineering Technologies (Cont.)

- *81004 University of Minnesota - Crookston
Technical College
- *82005 Brown Institute
- *82009 Dunwoody Industrial Institute
- *82027 Minnesota School of Business
- 84019 Saint Mary's College

271 Vehicle and Equipment Operation

- *25002 Alexandria AVTI
- *25008 Dakota County AVTI
- *25022 916 AVTI
- *25025 Saint Paul AVTI
- *25026 Staples AVTI
- *25032 East Grand Forks AVTI
- *25033 Red Wing AVTI

272 Aviation Management

- *25002 Alexandria AVTI
- *25003 Anoka AVTI
- *27152 Anoka-Ramsey Community College
- *27157 Inver Hills Community College

274 Flight Training

- *81002 University of Minnesota (Twin
Cities)
- *81004 University of Minnesota - Crookston
Technical College

275 Aviation Maintenance

- *25002 Alexandria AVTI
- *25018 Minneapolis Technical Institute
- *25028 Thief River Falls AVTI
- *25031 Winona AVTI
- *27151 Minneapolis Community College

278 Gas and Diesel Mechanics

- *25001 Albert Lea AVTI
- *25002 Alexandria AVTI
- *25003 Anoka AVTI
- *25004 Austin AVTI
- *25005 Bemidji AVTI
- *25006 Brainerd AVTI
- *25007 Canby AVTI
- *25008 Dakota County AVTI
- *25009 Detroit Lakes AVTI
- *25010 Duluth AVTI
- *25011 Eveleth AVTI
- *25014 Hibbing AVTI
- *25015 Hutchinson AVTI
- *25016 Jackson AVTI
- *25017 Mankato AVTI
- *25018 Minneapolis Technical Institute
- *25019 Moorhead AVTI
- *25020 Pine Technical Institute
- *25021 Pipestone AVTI
- *25022 916 AVTI
- *25023 Rochester AVTI
- *25024 Saint Cloud AVTI
- *25025 Saint Paul AVTI

278 Gas and Diesel Mechanics (Cont.)

- *25026 Staples AVTI
- *25027 Hennepin Technical Centers
- *25028 Thief River Falls AVTI
- *25029 Wadena AVTI
- *25030 Willmar AVTI
- *25031 Winona AVTI
- *25032 East Grand Forks AVTI
- *25033 Red Wing AVTI
- *82009 Dunwoody Industrial Institute

279 Small Engine Repair

- *25003 Anoka AVTI
- *25006 Brainerd AVTI
- *25009 Detroit Lakes AVTI
- *25012 Faribault AVTI
- *25015 Hutchinson AVTI
- *25022 916 AVTI
- *25027 Hennepin Technical Centers
- *25031 Winona AVTI
- *27155 Rainy River Community College

281 Auto Body Repair

- *25003 Anoka AVTI
- *25004 Austin AVTI
- *25005 Bemidji AVTI
- *25006 Brainerd AVTI
- *25008 Dakota County AVTI
- *25009 Detroit Lakes AVTI
- *25010 Duluth AVTI
- *25013 Granite Falls AVTI
- *25016 Jackson AVTI
- *25017 Mankato AVTI
- *25022 916 AVTI
- *25024 Saint Cloud AVTI
- *25025 Saint Paul AVTI
- *25027 Hennepin Technical Centers
- *25028 Thief River Falls AVTI
- *25029 Wadena AVTI
- *25030 Willmar AVTI
- *25031 Winona AVTI
- *82009 Dunwoody Industrial Institute

283 Instrument Repair

- *25020 Pine Technical Institute
- *25025 Saint Paul AVTI
- *25033 Red Wing AVTI

287 Industrial Mechanics

- *25001 Albert Lea AVTI
- *25008 Dakota County AVTI
- *25009 Detroit Lakes AVTI
- *25011 Eveleth AVTI
- *25014 Hibbing AVTI
- *25026 Staples AVTI
- *25027 Hennepin Technical Centers
- *25033 Red Wing AVTI
- *26073 Saint Cloud AVTI
- *27153 North Hennepin Community College

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

288 Construction Trades

- *25001 Albert Lea AVTI
- *25002 Alexandria AVTI
- *25003 Anoka AVTI
- *25004 Austin AVTI
- *25005 Bemidji AVTI
- *25007 Canby AVTI
- *25008 Dakota County AVTI
- *25009 Detroit Lakes AVTI
- *25010 Duluth AVTI
- *25011 Eveleth AVTI
- *25012 Faribault AVTI
- *25016 Jackson AVTI
- *25018 Minneapolis Technical Institute
- *25019 Moorhead AVTI
- *25021 Pipestone AVTI
- *25023 Rochester AVTI
- *25024 Saint Cloud AVTI
- *25025 Saint Paul AVTI
- *25026 Staples AVTI
- *25027 Hennepin Technical Centers
- *25028 Thief River Falls AVTI
- *25029 Wadena AVTI
- *25030 Willmar AVTI
- *25031 Winona AVTI
- *25032 East Grand Forks AVTI
- *27153 North Hennepin Community College
- *27157 Inver Hills Community College
- *82009 Dunwoody Industrial Institute

289 Woodworking

- *25008 Dakota County AVTI
- *25018 Minneapolis Technical Institute
- *25025 Saint Paul AVTI
- *25027 Hennepin Technical Centers

291 Drafting

- *25001 Albert Lea AVTI
- *25002 Alexandria AVTI
- *25003 Anoka AVTI
- *25007 Canby AVTI
- *25008 Dakota County AVTI
- *25009 Detroit Lakes AVTI
- *25010 Duluth AVTI
- *25012 Faribault AVTI
- *25013 Granite Falls AVTI
- *25015 Hutchinson AVTI
- *25016 Jackson AVTI
- *25017 Mankato AVTI
- *25018 Minneapolis Technical Institute
- *25019 Moorhead AVTI
- *25022 916 AVTI
- *25023 Rochester AVTI
- *25024 Saint Cloud AVTI
- *25025 Saint Paul AVTI
- *25026 Staples AVTI
- *25027 Hennepin Technical Centers
- *25028 Thief River Falls AVTI
- *25030 Willmar AVTI
- *25031 Winona AVTI
- 26072 Moorhead State University
- *27143 Hibbing Community College
- *27148 Rochester Community College
- *27151 Minneapolis Community College
- *27156 Normandale Community College
- *82009 Dunwoody Industrial Institute
- *82024 Minneapolis Drafting School
- *82032 Northwest Technical Institute

292 Electricity and Electronics Repair

- *25002 Alexandria AVTI
- *25006 Brainerd AVTI
- *25008 Dakota County AVTI
- *25010 Duluth AVTI
- *25014 Hibbing AVTI
- *25015 Hutchinson AVTI
- *25016 Jackson AVTI
- *25017 Mankato AVTI
- *25022 916 AVTI
- *25024 Saint Cloud AVTI
- *25027 Hennepin Technical Centers
- *25029 Wadena AVTI
- *25030 Willmar AVTI
- *25031 Winona AVTI
- *27151 Minneapolis Community College
- *82005 Brown Institute
- *82009 Dunwoody Industrial Institute
- *82027 Minnesota School of Business
- *82033 Northwestern Electronics Institute

295 Metalworking

- *25001 Albert Lea AVTI
- *25002 Alexandria AVTI
- *25003 Anoka AVTI
- *25004 Austin AVTI
- *25006 Brainerd AVTI
- *26007 Canby AVTI
- *25008 Dakota County AVTI
- *25009 Detroit Lakes AVTI
- *25010 Duluth AVTI
- *25011 Eveleth AVTI
- *25012 Faribault AVTI
- *25013 Granite Falls AVTI
- *25014 Hibbing AVTI
- *25015 Hutchinson AVTI
- *25017 Mankato AVTI
- *25018 Minneapolis Technical Institute
- *25019 Moorhead AVTI
- *25020 Pine Technical Institute
- *25022 916 AVTI
- *25023 Rochester AVTI
- *25024 Saint Cloud AVTI
- *25025 Saint Paul AVTI
- *25026 Staples AVTI
- *25027 Hennepin Technical Centers
- *25028 Thief River Falls AVTI
- *25030 Willmar AVTI
- *25031 Winona AVTI
- *25032 East Grand Forks AVTI
- *25033 Red Wing AVTI
- *27144 Itasca Community College
- *82009 Dunwoody Industrial Institute

297 Heating and Cooling Mechanics

- *25001 Albert Lea AVTI
- *25003 Anoka AVTI
- *25017 Mankato AVTI
- *25019 Moorhead AVTI
- *25022 916 AVTI
- *25023 Rochester AVTI
- *25024 Saint Cloud AVTI
- *25027 Hennepin Technical Centers
- *25033 Red Wing AVTI
- *82009 Dunwoody Industrial Institute

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

298 Precision Production Work

- *25011 Eveleth AVTI
- *25018 Minneapolis Technical Institute
- *25021 Pipestone AVTI
- *25024 Saint Cloud AVTI
- *25027 Hennepin Technical Centers
- *27153 North Hennepin Community College

311 Art

- 25009 Detroit Lakes AVTI
- 26070 Bemidji State University
- 26071 Mankato State University
- 26072 Moorhead State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- 26175 Southwest State University
- 26176 Metropolitan State University
- *81002 University of Minnesota (Twin Cities)
- 81003 University of Minnesota (Morris)
- 82002 Art Instruction Schools, Inc.
- 84001 Augsburg College
- 84002 Bethel College and Seminary
- 84003 Carleton College
- 84004 Concordia College (Moorhead)
- 84005 Concordia College (Saint Paul)
- 84007 Gustavus Adolphus College
- 84008 Hamline University
- 84010 Macalester College
- 84011 Minneapolis College of Art and Design
- *84014 Northwestern College
- 84016 College of Saint Benedict
- 84017 College of Saint Catherine
- 84018 Saint John's University
- 84019 Saint Mary's College
- 84020 Saint Olaf College
- 84023 College of Saint Teresa
- 84024 College of Saint Thomas
- 84026 School of the Associated Arts

314 Music

- 26070 Bemidji State University
- 26071 Mankato State University
- 26072 Moorhead State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- 26175 Southwest State University
- 26176 Metropolitan State University
- 81001 University of Minnesota (Duluth)
- 81002 University of Minnesota (Twin Cities)
- 81003 University of Minnesota (Morris)
- 84001 Augsburg College
- 84002 Bethel College and Seminary
- 84003 Carleton College
- 84004 Concordia College (Moorhead)
- 84005 Concordia College (Saint Paul)
- 84007 Gustavus Adolphus College
- 84008 Hamline University
- 84010 Macalester College
- 84013 North Central Bible College
- 84014 Northwestern College
- 84015 Pillsbury Baptist Bible College
- *84016 College of Saint Benedict
- 84017 College of Saint Catherine

314 Music (Cont.)

- 84018 Saint John's University
- 84019 Saint Mary's College
- 84020 Saint Olaf College
- 84021 Saint Paul Bible College
- 84022 College of Saint Scholastica
- 84023 College of Saint Teresa
- 84024 College of Saint Thomas

315 Dance

- 81002 University of Minnesota (Twin Cities)
- 84020 Saint Olaf College
- 84023 College of Saint Teresa

316 Dramatic Arts

- 26070 Bemidji State University
- 26071 Mankato State University
- 26072 Moorhead State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- 26175 Southwest State University
- 26176 Metropolitan State University
- 81001 University of Minnesota (Duluth)
- 81002 University of Minnesota (Twin Cities)
- 81003 University of Minnesota (Morris)
- 84001 Augsburg College
- 84002 Bethel College and Seminary
- 84004 Concordia College (Moorhead)
- 84007 Gustavus Adolphus College
- 84008 Hamline University
- 84010 Macalester College
- 84016 College of Saint Benedict
- 84018 Saint John's University
- 84019 Saint Mary's College
- 84020 Saint Olaf College
- 84024 College of Saint Thomas

317 Photographic Arts

- *25008 Dakota County AVTI
- *25027 Hennepin Technical Centers
- *25030 Willmar AVTI
- 26176 Metropolitan State University
- 81002 University of Minnesota (Twin Cities)
- *82087 School of Communication Arts
- 84011 Minneapolis College of Art and Design

318 Printing and Graphics

- *25002 Alexandria AVTI
- *25004 Austin AVTI
- *25007 Canby AVTI
- *25008 Dakota County AVTI
- *25011 Eveleth AVTI
- *25017 Mankato AVTI
- *25018 Minneapolis Technical Institute
- *25019 Moorhead AVTI
- *25022 916 AVTI
- *25024 Saint Cloud AVTI

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

318 Printing and Graphics (Cont.)

- *25025 Saint Paul AVTI
- *25026 Staples AVTI
- *25027 Hennepin Technical Centers
- *25030 Willmar AVTI
- *26070 Bemidji State University
- *27151 Minneapolis Community College
- *27153 North Hennepin Community College
- *27154 Lakewood Community College
- *27157 Inver Hills Community College
- *82009 Dunwoody Industrial Institute
- 84011 Minneapolis College of Art and Design
- *84014 Northwestern College
- 84026 School of the Associated Arts

319 Modeling

- 82043 Sears Discovery Studio
- *82082 John Robert Powers Modeling and Career School

353 Nursing

- *25002 Alexandria AVTI
- *25003 Anoka AVTI
- *25004 Austin AVTI
- *25005 Bemidji AVTI
- *25006 Brainerd AVTI
- *25008 Dakota County AVTI
- *25009 Detroit Lakes AVTI
- *25010 Duluth AVTI
- *25011 Eveleth AVTI
- *25012 Faribault AVTI
- *25014 Hibbing AVTI
- *25016 Jackson AVTI
- *25017 Mankato AVTI
- *25018 Minneapolis Technical Institute
- *25022 916 AVTI
- *25023 Rochester AVTI
- *25024 Saint Cloud AVTI
- *25025 Saint Paul AVTI
- *25027 Hennepin Technical Centers
- *25028 Thief River Falls AVTI
- *25030 Willmar AVTI
- *25031 Winona AVTI
- *25032 East Grand Forks AVTI
- *25033 Red Wing AVTI
- 26071 Mankato State University
- 26072 Moorhead State University
- 26074 Winona State University
- 26176 Metropolitan State University
- *27139 Austin Community College
- *27140 Brainerd Community College
- *27142 Fergus Falls Community College
- *27143 Hibbing Community College
- *27144 Itasca Community College
- *27145 Willmar Community College
- *27146 Worthington Community College
- *27148 Rochester Community College
- *27149 Northland Community College
- *27151 Minneapolis Community College
- *27152 Anoka-Ramsey Community College
- *27153 North Hennepin Community College
- *27154 Lakewood Community College
- *27155 Rainy River Community College
- *27156 Normandale Community College

353 Nursing (Cont.)

- *27157 Inver Hills Community College
- 81002 University of Minnesota (Twin Cities)
- *83004 Saint Mary's Junior College
- 84001 Augsburg College
- 84002 Bethel College and Seminary
- 84007 Gustavus Adolphus College
- *84012 Minnesota Bible College
- 84016 College of Saint Benedict
- 84017 College of Saint Catherine
- 84018 Saint John's University
- 84019 Saint Mary's College
- 84020 Saint Olaf College
- 84022 College of Saint Scholastica
- 84023 College of Saint Teresa
- 85013 Mayo School of Health Related Sciences
- 90013 Saint Cloud Hospital School of Nursing
- 90095 Veterans Administration Hospital School of Anesthesia
- 90097 Fairview Deaconess Hospital School of Nursing
- 90098 Abbott-Northwestern Hospital School of Anesthesia

357 Dentistry

- 81002 University of Minnesota (Twin Cities)
- 81006 Mayo Graduate School of Medicine

358 Allied Dental Services

- *25005 Bemidji AVTI
- *25006 Brainerd AVTI
- *25007 Canby AVTI
- *25014 Hibbing AVTI
- *25022 916 AVTI
- *25023 Rochester AVTI
- *25024 Saint Cloud AVTI
- *25027 Hennepin Technical Centers
- *26071 Mankato State University
- *27153 North Hennepin Community College
- *27156 Normandale Community College
- *81001 University of Minnesota (Duluth)
- *81002 University of Minnesota (Twin Cities)
- *81037 Lakeland Medical-Dental Academy
- *82022 Medical Institute of Minnesota
- *82025 Minnesota Institute of Medical and Dental Assisting

363 Medicine

- 81002 University of Minnesota (Twin Cities)
- 81006 Mayo Graduate School of Medicine
- 85012 Mayo Medical School

366 Medical Assisting

- *25003 Anoka AVTI
- *25022 916 AVTI
- *25030 Willmar AVTI

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

366 Medical Assisting (Cont.)

- *25032 East Grand Forks AVTI
- *27156 Normandale Community College
- *81037 Lakeland Medical-Dental Academy
- *82022 Medical Institute of Minnesota
- *82025 Minnesota Institute of Medical and Dental Assisting
- *82042 Stratford School

367 Rehabilitation Services

- *25003 Anoka AVTI
- *25010 Duluth AVTI
- *25017 Mankato AVTI
- *25022 916 AVTI
- 26071 Mankato State University
- 26072 Moorhead State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- *27147 Vermillion Community College
- *27152 Anoka-Ramsey Community College
- 81001 University of Minnesota (Duluth)
- 81002 University of Minnesota (Twin Cities)
- *83004 Saint Mary's Junior College
- 84007 Gustavus Adolphus College
- 84016 College of Saint Benedict
- 84017 College of Saint Catherine
- 84018 Saint John's University
- 84022 College of Saint Scholastica
- 84023 College of Saint Teresa
- 85013 Mayo School of Health Related Sciences

368 Speech Pathology and Audiology

- 26071 Mankato State University
- 26072 Moorhead State University
- 26073 Saint Cloud State University
- 26074 Winona State University

369 Optometry

371 Optical Services

- *25003 Anoka AVTI
- *25011 Eveleth AVTI
- *25013 Granite Falls AVTI
- *25024 Saint Cloud AVTI

372 Pharmacy

- 81002 University of Minnesota (Twin Cities)

373 Chiropractic

- 85010 Northwestern College of Chiropractic

376 Public Health

- 26071 Mankato State University
- 26072 Moorhead State University
- 26074 Winona State University
- 26176 Metropolitan State University
- 81002 University of Minnesota (Twin Cities)

378 Veterinary Medicine

- 81002 University of Minnesota (Twin Cities)

379 Allied Veterinary Services

- *81005 University of Minnesota - Waseca Technical College
- *82022 Medical Institute of Minnesota

381 Emergency Medical Care

- *25022 916 AVTI
- *26071 Mankato State University

383 Medical Laboratory Technologies

- *25002 Alexandria AVTI
- *25010 Duluth AVTI
- *25012 Faribault AVTI
- *25014 Hibbing AVTI
- *25025 Saint Paul TVI
- *25032 East Grand Forks AVTI
- 26070 Bemidji State University
- *26071 Mankato State University
- 26072 Moorhead State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- 26175 Southwest State University
- *27142 Fergus Falls Community College
- *27143 Hibbing Community College
- *27151 Minneapolis Community College
- 81002 University of Minnesota (Twin Cities)
- *81037 Lakeland Medical Dental Academy
- *82022 Medical Institute of Minnesota
- *83004 Saint Mary's Junior College
- 84001 Augsburg College
- 84002 Bethel College and Seminary
- 84004 Concordia College (Moorhead)
- 84007 Gustavus Adolphus College
- 84016 College of Saint Benedict
- 84018 Saint John's University
- 84019 Saint Mary's College
- 84022 College of Saint Scholastica
- 84023 College of Saint Teresa
- *85013 Mayo School of Health Related Sciences

385 Radiological Technology

- 26073 Saint Cloud State University
- *27145 Willmar Community College
- *27148 Rochester Community College
- *27157 Inver Hills Community College

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

385 Radiological Technology (Cont.)

- *81002 University of Minnesota (Twin Cities)
- 84019 Saint Mary's College
- *85013 Mayo School of Health Related Sciences
- *90005 St. Mary's Hospital School of Radiologic Technology (Duluth)
- *90014 Rice Memorial Hospital - School of Radiological Technology
- *90031 Abbott-Northwestern Hospital - School of Radiologic Technology
- *90034 Methodist Hospital - School of Radiological Technology
- *90035 Veterans Administration Hospital School of Radiologic Technology
- *90044 North Memorial Medical Center - School of X-ray Technique
- *90099 Saint Cloud Hospital School of X-ray Technology

387 Other Health Technologies

- *25003 Anoka AVTI
- *25023 Rochester AVTI
- *25024 Saint Cloud AVTI
- *25025 Saint Paul TVI
- *25032 East Grand Forks AVTI
- *27142 Fergus Falls Community College
- *27148 Rochester Community College
- *27152 Anoka-Ramsey Community College
- *27153 North Hennepin Community College
- *81002 University of Minnesota (Twin Cities)
- *83004 Saint Mary's Junior College
- 84020 Saint Olaf College
- *85013 Mayo School of Health Related Sciences

391 Home Economics

- 26071 Mankato AVTI
- 81001 University of Minnesota (Duluth)
- 81002 University of Minnesota (Twin Cities)
- *81004 University of Minnesota - Crookston Technical College
- *81005 University of Minnesota - Waseca Technical College
- 84004 Concordia College (Moorhead)
- 84016 College of Saint Benedict
- 84017 College of Saint Catherine
- 84018 Saint John's University
- 84020 Saint Olaf College
- 84022 College of Saint Scholastica
- 84023 College of Saint Thomas

393 Dietetics

- *25002 Alexandria AVTI
- *25022 916 AVTI
- *27154 Lakewood Community College
- *27156 Normandale Community College
- 81002 University of Minnesota (Twin Cities)
- 84016 College of Saint Benedict
- 84017 College of Saint Catherine
- 84018 Saint John's University
- 84022 College of Saint Scholastica
- 84024 College of Saint Thomas

395 Textiles and Clothing

- *25014 Hibbing AVTI
- *25018 Minneapolis Technical Institute
- *25021 Pipestone AVTI
- *25022 916 AVTI
- *25025 Saint Paul TVI
- *27148 Rochester Community College
- 81002 University of Minnesota (Twin Cities)
- 84011 Minneapolis College of Art and Design
- 84017 College of Saint Catherine
- 84024 College of Saint Thomas

397 Child Development and Child Care

- *25003 Anoka AVTI
- *25022 916 AVTI
- *25023 Rochester AVTI
- *25024 Saint Cloud AVTI
- *25027 Hennepin Technical Centers
- *27140 Brainerd Community College
- *27151 Minneapolis Community College
- *27154 Lakewood Community College
- *81002 University of Minnesota (Twin Cities)
- *84005 Concordia College (Saint Paul)

399 Food Service

- *25001 Albert Lea AVTI
- *25003 Anoka AVTI
- *25006 Brainerd AVTI
- *25007 Canby AVTI
- *25008 Dakota County AVTI
- *25009 Detroit Lakes AVTI
- *25010 Duluth AVTI
- *25014 Hibbing AVTI
- *25017 Mankato AVTI
- *25018 Minneapolis Technical Institute
- *25019 Moorhead AVTI
- *25021 Pipestone AVTI
- *25022 916 AVTI
- *25023 Rochester AVTI
- *25024 Saint Cloud AVTI
- *25025 Saint Paul TVI
- *25026 Staples AVTI
- *25027 Hennepin Technical Centers
- *25030 Willmar AVTI
- *81004 University of Minnesota - Crookston Technical College
- *82009 Dunwoody Industrial Institute
- *82026 Minnesota School of Bartending
- *82111 L'Hotel Sofitel School of French Culinary Skill
- 84018 Saint John's University

421 Law

- 26072 Moorhead State University
- 26074 Winona State University
- *27153 North Hennepin Community College
- *27157 Inver Hills Community College
- *81002 University of Minnesota (Twin Cities)
- 84008 Hamline University
- 85006 William Mitchell College of Law

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

441 English and Literature

26070 Bemidji State University
 26071 Mankato State University
 26072 Moorhead State University
 26073 Saint Cloud State University
 26074 Winona State University
 26175 Southwest State University
 26176 Metropolitan State University
 81001 University of Minnesota (Duluth)
 81002 University of Minnesota (Twin Cities)
 81003 University of Minnesota (Morris)
 84001 Augsburg College
 84002 Bethel College and Seminary
 84003 Carleton College
 84004 Concordia College (Moorhead)
 84005 Concordia College (Saint Paul)
 84007 Gustavus Adolphus College
 84008 Hamline University
 84010 Macalester College
 84015 Pillsbury Baptist Bible College
 *84016 College of Saint Benedict
 84017 College of Saint Catherine
 84018 Saint John's University
 84019 Saint Mary's College
 84020 Saint Olaf College
 84022 College of Saint Scholastica
 84023 College of Saint Teresa
 84024 College of Saint Thomas

443 Speech

26070 Bemidji State University
 26071 Mankato State University
 26072 Moorhead State University
 26073 Saint Cloud State University
 26074 Winona State University
 26175 Southwest State University
 26176 Metropolitan State University
 81001 University of Minnesota (Duluth)
 81002 University of Minnesota (Twin Cities)
 81003 University of Minnesota (Morris)
 84001 Augsburg College
 84002 Bethel College and Seminary
 84004 Concordia College (Moorhead)
 84007 Gustavus Adolphus College
 84010 Macalester College
 84015 Pillsbury Baptist Bible College
 84017 College of Saint Catherine
 84020 Saint Olaf College
 84024 College of Saint Thomas

445 Foreign Languages

26070 Bemidji State University
 26071 Mankato State University
 26072 Moorhead State University
 26073 Saint Cloud State University
 26074 Winona State University
 26176 Metropolitan State University
 81001 University of Minnesota (Duluth)
 81002 University of Minnesota (Twin Cities)
 81003 University of Minnesota (Morris)
 84001 Augsburg College

445 Foreign Languages (Cont.)

84002 Bethel College and Seminary
 84003 Carleton College
 84004 Concordia College (Moorhead)
 84005 Concordia College (Saint Paul)
 84007 Gustavus Adolphus College
 84008 Hamline University
 84010 Macalester College
 84016 College of Saint Benedict
 84017 College of Saint Catherine
 84018 Saint John's University
 84019 Saint Mary's College
 84020 Saint Olaf College
 84023 College of Saint Teresa
 84024 College of Saint Thomas

448 Liberal Studies

26070 Bemidji State University
 *26071 Mankato State University
 *26072 Moorhead State University
 26073 Saint Cloud State University
 *26074 Winona State University
 26175 Southwest State University
 26176 Metropolitan State University
 *27139 Austin Community College
 *27143 Hibbing Community College
 *27144 Itasca Community College
 *27145 Willmar Community College
 *27148 Rochester Community College
 *27149 Northland Community College
 *27150 Mesabi Community College
 *27152 Anoka-Ramsey Community College
 *27154 Lakewood Community College
 *27155 Rainy River Community College
 *27156 Normandale Community College
 *27157 Inver Hills Community College
 81001 University of Minnesota (Duluth)
 *81002 University of Minnesota (Twin Cities)
 *81004 University of Minnesota - Crookston Technical college
 *83001 Bethany Lutheran Junior College
 *83002 Crosier Seminary Junior College
 *83003 Golden Valley Lutheran College
 84001 Augsburg College
 84002 Bethel College and Seminary
 84003 Carleton College
 84004 Concordia College (Moorhead)
 84005 Concordia College (Saint Paul)
 84007 Gustavus Adolphus College
 84008 Hamline University
 84010 Macalester College
 84011 Minneapolis College of Art and Design
 *84013 North Central Bible College
 *84014 Northwestern College
 *84016 College of Saint Benedict
 84017 College of Saint Catherine
 84018 Saint John's University
 84019 Saint Mary's College
 84020 Saint Olaf College
 *84021 Saint Paul Bible College
 84023 College of Saint Teresa
 84024 College of Saint Thomas

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

461 Library Science

- 26071 Mankato State University
- 26073 Saint Cloud State University
- 26176 Metropolitan State University
- 81002 University of Minnesota (Twin Cities)
- 84017 College of Saint Catherine

481 Mathematics

- 26070 Bemidji State University
- 26071 Mankato State University
- 26072 Moorhead State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- 26175 Southwest State University
- 26176 Metropolitan State University
- 81001 University of Minnesota (Duluth)
- 81002 University of Minnesota (Twin Cities)
- 81003 University of Minnesota (Morris)
- 84001 Augsburg College
- 84002 Bethel College and Seminary
- 84003 Carleton College
- 84004 Concordia College (Moorhead)
- 84005 Concordia College (Saint Paul)
- 84007 Gustavus Adolphus College
- 84008 Hamline University
- 84010 Macalester College
- 84015 Pillsbury Baptist Bible College
- 84016 College of Saint Benedict
- 84017 College of Saint Catherine
- 84018 Saint John's University
- 84019 Saint Mary's College
- 84020 Saint Olaf College
- 84022 College of Saint Scholastica
- 84023 College of Saint Teresa
- 84024 College of Saint Thomas

521 General Physical Science

- 26070 Bemidji State University
- 26071 Mankato State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- 26175 Southwest State University
- *27145 Willmar Community College
- *81002 University of Minnesota (Twin Cities)
- 84004 Concordia College (Moorhead)
- 84005 Concordia College (Saint Paul)
- 84007 Gustavus Adolphus College
- 84015 Pillsbury Baptist Bible College
- 84019 Saint Mary's College
- 84022 College of Saint Scholastica

522 Astronomy

- 26071 Mankato State University
- 81002 University of Minnesota (Twin Cities)

523 Atmospheric Science

524 Chemistry

- 26070 Bemidji State University
- 26071 Mankato State University
- 26072 Moorhead State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- 26175 Southwest State University
- 81001 University of Minnesota (Duluth)
- 81002 University of Minnesota (Twin Cities)
- 81003 University of Minnesota (Morris)
- 84001 Augsburg College
- 84002 Bethel College and Seminary
- 84003 Carleton College
- 84004 Concordia College (Moorhead)
- 84007 Gustavus Adolphus College
- 84008 Hamline University
- 84010 Macalester College
- 84016 College of Saint Benedict
- 84017 College of Saint Catherine
- 84018 Saint John's University
- 84019 Saint Mary's College
- 84020 Saint Olaf College
- 84022 College of Saint Scholastica
- 84024 College of Saint Thomas

526 Geology

- 26070 Bemidji State University
- 26071 Mankato State University
- 26072 Moorhead State University
- 26074 Winona State University
- 26175 Southwest State University
- 81001 University of Minnesota (Duluth)
- 81002 University of Minnesota (Twin Cities)
- 81003 University of Minnesota (Morris)
- 84003 Carleton College
- 84007 Gustavus Adolphus College
- 84010 Macalester College
- 84016 College of Saint Benedict
- 84017 College of Saint Catherine
- 84018 Saint John's University
- 84024 College of Saint Thomas

528 Oceanography

529 Physics

- 26070 Bemidji State University
- 26071 Mankato State University
- 26072 Moorhead State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- 26175 Southwest State University
- 81001 University of Minnesota (Duluth)
- 81002 University of Minnesota (Twin Cities)
- 81003 University of Minnesota (Morris)
- 84001 Augsburg College
- 84002 Bethel College and Seminary
- 84003 Carleton College
- 84004 Concordia College (Moorhead)
- 84007 Gustavus Adolphus College

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

529 Physics (Cont.)

84008 Hamline University
84010 Macalester College
84016 College of Saint Benedict
84017 College of Saint Catherine
84018 Saint John's University
84019 Saint Mary's College
84020 Saint Olaf College
84024 College of Saint Thomas

531 Life Sciences

26070 Bemidji State University
26071 Mankato State University
26072 Moorhead State University
26073 Saint Cloud State University
26074 Winona State University
26175 Southwest State University
81001 University of Minnesota (Duluth)
81002 University of Minnesota (Twin Cities)
81003 University of Minnesota (Morris)
81006 Mayo Graduate School of Medicine
84001 Augsburg College
84002 Bethel College and Seminary
84003 Carleton College
84004 Concordia College (Moorhead)
84005 Concordia College (Saint Paul)
84007 Gustavus Adolphus College
84008 Hamline University
84010 Macalester College
84016 College of Saint Benedict
84017 College of Saint Catherine
84018 Saint John's University
84019 Saint Mary's College
84020 Saint Olaf College
84022 College of Saint Scholastica
84023 College of Saint Teresa
84024 College of Saint Thomas

533 Science Technologies

*25002 Alexandria AVTI
*25013 Granite Falls AVTI
*25022 916 AVTI
*25023 Rochester AVTI
*25024 Saint Cloud AVTI
*25027 Hennepin Technical Centers
*26071 Mankato State University
*26072 Moorhead State University

541 Psychology

26070 Bemidji State University
26071 Mankato State University
26072 Moorhead State University
26073 Saint Cloud State University
26074 Winona State University
26175 Southwest State University
26176 Metropolitan State University
81001 University of Minnesota (Duluth)
81002 University of Minnesota (Twin Cities)

541 Psychology (Cont.)

81003 University of Minnesota (Morris)
84001 Augsburg College
84002 Bethel College and Seminary
84003 Carleton College
84004 Concordia College (Moorhead)
84007 Gustavus Adolphus College
84008 Hamline University
84010 Macalester College
84016 College of Saint Benedict
84017 College of Saint Catherine
84018 Saint John's University
84019 Saint Mary's College
84020 Saint Olaf College
84022 College of Saint Scholastica
84023 College of Saint Teresa
84024 College of Saint Thomas

562 Public Administration

26071 Mankato State University
26073 Saint Cloud State University
26074 Winona State University
26176 Metropolitan State University
81002 University of Minnesota (Twin Cities)
84008 Hamline University
84017 College of Saint Catherine
84024 College of Saint Thomas

564 Recreation

26071 Mankato State University
26074 Winona State University
26176 Metropolitan State University
27147 Vermillion Community College
81002 University of Minnesota (Twin Cities)
*81004 University of Minnesota - Crookston Technical College
*81005 University of Minnesota - Waseca Technical College
84004 Concordia College (Moorhead)
84017 College of Saint Catherine

565 Social Service

*25003 Anoka AVTI
*25012 Faribault AVTI
*25015 Hutchinson AVTI
*25017 Mankato AVTI
*25023 Rochester AVTI
*25030 Willmar AVTI
26070 Bemidji State University
26071 Mankato State University
26072 Moorhead State University
26073 Saint Cloud State University
26176 Metropolitan State University
*27139 Austin Community College
*27145 Willmar Community College
*27146 Worthington Community College
*27150 Mesabi Community College
*27151 Minneapolis Community College
*27153 North Hennepin Community College
*27154 Lakewood Community College
*27157 Inver Hills Community College

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

565 Social Service (Cont.)

- 81001 University of Minnesota (Duluth)
- *81002 University of Minnesota (Twin Cities)
- 81003 University of Minnesota (Morris)
- *81004 University of Minnesota - Crookston Technical College
- *81005 University of Minnesota - Waseca Technical College
- *83001 Bethany Lutheran Junior College
- *83003 Golden Valley Lutheran College
- *83004 Saint Mary's Junior College
- 84001 Augsburg College
- 84002 Bethel College and Seminary
- 84004 Concordia College (Moorhead)
- 84016 College of Saint Benedict
- 84017 College of Saint Catherine
- 84018 Saint John's University
- 84019 Saint Mary's College
- 84020 Saint Olaf College
- 84022 College of Saint Scholastica
- 84023 College of Saint Teresa
- 84024 College of Saint Thomas

567 Criminal Justice

- *25002 Alexandria AVTI
- *25014 Hibbing AVTI
- *26070 Bemidji State University
- *26071 Mankato State University
- 26072 Moorhead State University
- 26073 Saint Cloud State University
- 26176 Metropolitan State University
- *27140 Brainerd Community College
- *27145 Willmar Community College
- *27148 Rochester Community College
- *27149 Northland Community College
- *27150 Mesabi Community College
- *27151 Minneapolis Community College
- *27153 North Hennepin Community College
- *27154 Lakewood Community College
- *27156 Normandale Community College
- *27157 Inver Hills Community College
- *81001 University of Minnesota (Duluth)
- *81002 University of Minnesota (Twin Cities)
- 84007 Gustavus Adolphus College
- 84019 Saint Mary's College
- 84023 College of Saint Teresa

569 Fire Control

- *81002 University of Minnesota (Twin Cities)

581 General Social Science

- 26070 Bemidji State University
- 26071 Mankato State University
- 26072 Moorhead State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- 26176 Metropolitan State University
- 81001 University of Minnesota (Duluth)
- 81003 University of Minnesota (Morris)
- 84004 Concordia College (Moorhead)

581 General Social Science (Cont.)

- 84005 Concordia College (Saint Paul)
- 84007 Gustavus Adolphus College
- 84014 Northwestern College
- 84016 College of Saint Benedict
- 84017 College of Saint Catherine
- 84018 Saint John's University
- 84019 Saint Mary's College
- 84020 Saint Olaf College
- 84022 College of Saint Scholastica
- 84023 College of Saint Teresa
- 84024 College of Saint Thomas

582 Anthropology

- 26071 Mankato State University
- 26072 Moorhead State University
- 26073 Saint Cloud State University
- 26176 Metropolitan State University
- 81001 University of Minnesota (Duluth)
- 81002 University of Minnesota (Twin Cities)
- 84002 Bethel College and Seminary
- 84003 Carleton College
- 84008 Hamline University
- 84010 Macalester College

583 Economics

- 26070 Bemidji State University
- 26071 Mankato State University
- 26072 Moorhead State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- 26176 Metropolitan State University
- 81001 University of Minnesota (Duluth)
- 81002 University of Minnesota (Twin Cities)
- 81003 University of Minnesota (Morris)
- 84001 Augsburg College
- 84002 Bethel College and Seminary
- 84003 Carleton College
- 84004 Concordia College (Moorhead)
- 84007 Gustavus Adolphus College
- 84008 Hamline University
- 84016 College of Saint Benedict
- 84017 College of Saint Catherine
- 84018 Saint John's University
- 84019 Saint Mary's College
- 84020 Saint Olaf College
- 84024 College of Saint Thomas

584 Geography

- 26070 Bemidji State University
- 26071 Mankato State University
- 26072 Moorhead State University
- 26073 Saint Cloud State University
- 26074 Winona State University
- 26176 Metropolitan State University
- 81001 University of Minnesota (Duluth)
- 81002 University of Minnesota (Twin Cities)
- 84007 Gustavus Adolphus College
- 84010 Macalester College

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

585 History

26070 Bemidji State University
 26071 Mankato State University
 26072 Moorhead State University
 26073 Saint Cloud State University
 26074 Winona State University
 26175 Southwest State University
 26176 Metropolitan State University
 81001 University of Minnesota (Duluth)
 81002 University of Minnesota (Twin Cities)
 81003 University of Minnesota (Morris)
 84001 Augsburg College
 84002 Bethel College and Seminary
 84003 Carleton College
 84004 Concordia College (Moorhead)
 84005 Concordia College (Saint Paul)
 84007 Gustavus Adolphus College
 84008 Hamline University
 84010 Macalester College
 84015 Pillsbury Baptist Bible College
 84016 College of Saint Benedict
 84017 College of Saint Catherine
 84018 Saint John's University
 84019 Saint Mary's College
 84020 Saint Olaf College
 84021 Saint Paul Bible College
 84022 College of Saint Scholastica
 84023 College of Saint Teresa
 84024 College of Saint Thomas

586 Political Science

26070 Bemidji State University
 26071 Mankato State University
 26072 Moorhead State University
 26073 Saint Cloud State University
 26074 Winona State University
 26176 Metropolitan State University
 81001 University of Minnesota (Duluth)
 81002 University of Minnesota (Twin Cities)
 81003 University of Minnesota (Morris)
 84001 Augsburg College
 84002 Bethel College and Seminary
 84003 Carleton College
 84004 Concordia College (Moorhead)
 84007 Gustavus Adolphus College
 84008 Hamline University
 84010 Macalester College
 84016 College of Saint Benedict
 84017 College of Saint Catherine
 84018 Saint John's University
 84019 Saint Mary's College
 84020 Saint Olaf College
 84023 College of Saint Teresa
 84024 College of Saint Thomas

587 Sociology

26070 Bemidji State University
 26071 Mankato State University
 26072 Moorhead State University
 26073 Saint Cloud State University
 26074 Winona State University
 26175 Southwest State University

587 Sociology (Cont.)

26176 Metropolitan State University
 81001 University of Minnesota (Duluth)
 81002 University of Minnesota (Twin Cities)
 81003 University of Minnesota (Morris)
 84001 Augsburg College
 84002 Bethel College and Seminary
 84003 Carleton College
 84004 Concordia College (Moorhead)
 84007 Gustavus Adolphus College
 84008 Hamline University
 84010 Macalester College
 84016 College of Saint Benedict
 84017 College of Saint Catherine
 84018 Saint John's University
 84019 Saint Mary's College
 84020 Saint Olaf College
 84022 College of Saint Scholastica
 84023 College of Saint Teresa
 84024 College of Saint Thomas

588 Area and Ethnic Studies

26070 Bemidji State University
 26071 Mankato State University
 26072 Moorhead State University
 26073 Saint Cloud State University
 26176 Metropolitan State University
 81002 University of Minnesota (Twin Cities)
 81003 University of Minnesota (Morris)
 84001 Augsburg College
 84003 Carleton College
 84007 Gustavus Adolphus College
 84008 Hamline University
 84010 Macalester College
 84017 College of Saint Catherine
 84020 Saint Olaf College
 84022 College of Saint Scholastica
 84024 College of Saint Thomas

591 Philosophy

26070 Bemidji State University
 26071 Mankato State University
 26072 Moorhead State University
 26073 Saint Cloud State University
 26176 Metropolitan State University
 81001 University of Minnesota (Duluth)
 81002 University of Minnesota (Twin Cities)
 81003 University of Minnesota (Morris)
 84001 Augsburg College
 84002 Bethel College and Seminary
 84003 Carleton College
 84004 Concordia College (Moorhead)
 84007 Gustavus Adolphus College
 84008 Hamline University
 84010 Macalester College
 84016 College of Saint Benedict
 84017 College of Saint Catherine
 84018 Saint John's University
 84019 Saint Mary's College
 84020 Saint Olaf College
 84024 College of Saint Thomas

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

592 Religion

- 26176 Metropolitan State University
- 81002 University of Minnesota (Twin Cities)
- *83001 Bethany Lutheran Junior College
- *83003 Golden Valley Lutheran College
- 84001 Augsburg College
- 84002 Bethel College and Seminary
- 84004 Concordia College (Moorhead)
- 84005 Concordia College (Saint Paul)
- *84014 Northwestern College

595 Theology

- 81002 University of Minnesota (Twin Cities)
- *83001 Bethany Lutheran Junior College
- *83003 Golden Valley Lutheran College
- 84002 Bethel College and Seminary
- 84003 Carleton College
- 84007 Gustavus Adolphus College
- 84008 Hamline University
- 84010 Macalester College
- *84012 Minnesota Bible College
- 84013 North Central Bible College
- *84014 Northwestern College
- *84015 Pillsbury Baptist Bible College
- 84016 College of Saint Benedict
- 84017 College of Saint Catherine
- 84018 Saint John's University
- 84019 Saint Mary's College
- 84020 Saint Olaf College
- *84021 Saint Paul Bible College
- 84022 College of Saint Scholastica
- 84023 College of Saint Teresa
- 84024 College of Saint Thomas
- 85002 Luther Northwestern Theological Seminary
- *85004 Saint Paul Seminary
- 85005 United Theological Seminary of the Twin Cities
- 85008 Bethany Lutheran Theological Seminary

611 Military Studies

- 27154 Lakewood Community College
- 27157 Inver Hills Community College
- 81001 University of Minnesota (Duluth)
- 81002 University of Minnesota (Twin Cities)
- 84004 Concordia College (Moorhead)
- 84008 Hamline University
- 84016 College of Saint Benedict
- 84017 College of Saint Catherine
- 84018 Saint John's University
- 84022 College of Saint Scholastica
- 84024 College of Saint Thomas

631 Apprenticeship Programs

- *25001 Albert Lea AVTI
- *25002 Alexandria AVTI
- *25003 Anoka AVTI
- *25004 Austin AVTI
- *25005 Bemidji AVTI

631 Apprenticeship Programs (Cont.)

- *25006 Brainerd AVTI
- *25007 Canby AVTI
- *25010 Duluth AVTI
- *25014 Hibbing AVTI
- *25018 Minneapolis Technical Institute
- *25019 Moorhead AVTI
- *25021 Pipestone AVTI
- *25022 916 AVTI
- *25023 Rochester AVTI
- *25024 Saint Cloud AVTI
- *25025 Saint Paul TVI
- *25026 Staples AVTI
- *26027 Hennepin Technical Centers
- *25028 Thief River Falls AVTI
- *25030 Willmar AVTI
- *25031 Winona AVTI
- *25032 East Grand Forks AVTI
- *25033 Red Wing AVTI
- 26176 Metropolitan State University
- *27140 Brainerd Community College
- *27145 Willmar Community College
- *27146 Worthington Community College
- *27149 Northland Community College
- *27152 Anoka-Ramsey Community College
- *27156 Normandale Community College
- *81004 University of Minnesota - Crookston Technical College
- *81005 University of Minnesota - Waseca Technical College
- *82009 Dunwoody Industrial Institute
- *84007 Gustavus Adolphus College
- *84008 Hamline University
- 84012 Minnesota Bible College
- *84016 College of Saint Benedict
- *84018 Saint John's University
- *84019 Saint Mary's College
- *84024 College of Saint Thomas
- *85005 United Theological Seminary of the Twin Cities
- *85013 Mayo School of Health Related Sciences

633 Basic Skills

- *25001 Albert Lea AVTI
- *25002 Alexandria AVTI
- *25003 Anoka AVTI
- *25004 Austin AVTI
- *25006 Brainerd AVTI
- *25009 Detroit Lakes AVTI
- *25012 Faribault AVTI
- *25019 Moorhead AVTI
- *25021 Pipestone AVTI
- *25024 Saint Cloud AVTI
- *25027 Hennepin Technical Centers
- *25028 Thief River Falls AVTI
- *25029 Wadena AVTI
- *25030 Willmar AVTI
- *25031 Winona AVTI
- *25032 East Grand Forks AVTI
- *25033 Red Wing AVTI
- *27153 North Hennepin Community College
- *27157 Inver Hills Community College

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

637 Alternative Education

25001 Albert Lea AVTI
 *25002 Alexandria AVTI
 *25003 Anoka AVTI
 *25004 Austin AVTI
 *25005 Bemidji AVTI
 *25006 Brainerd AVTI
 *25007 Canby AVTI
 *25009 Detroit Lakes AVTI
 *25011 Eveleth AVTI
 *25012 Faribault AVTI
 *25013 Granite Falls AVTI
 *25017 Mankato AVTI
 *25018 Minneapolis Technical Institute
 *25019 Moorhead AVTI
 *25020 Pine Technical Institute
 *25021 Pipestone AVTI
 *25022 916 AVTI
 *25023 Rochester AVTI
 *25024 Saint Cloud AVTI
 *25025 Saint Paul TVI
 *25026 Staples AVTI
 *25027 Hennepin Technical Centers
 *25028 Thief River Falls AVTI
 *25029 Wadena AVTI
 *25030 Willmar AVTI
 *25031 Winona AVTI
 *25032 East Grand Forks AVTI
 *25033 Red Wing AVTI
 *26070 Bemidji State University
 *26071 Mankato State University
 *26072 Moorhead State University
 *26073 Saint Cloud State University
 *26074 Winona State University
 *26175 Southwest State University
 26176 Metropolitan State University
 *27139 Austin Community College
 *27140 Brainerd Community College
 *27142 Fergus Falls Community College
 *27144 Itasca Community College
 *27145 Willmar Community College
 *27146 Worthington Community College
 *27147 Vermilion Community College
 *27148 Rochester Community College
 *27149 Northland Community College
 *27150 Mesabi Community College
 *27152 Anoka-Ramsey Community College
 *27153 North Hennepin Community College
 *27154 Lakewood Community College
 *27155 Rainy River Community College
 *27156 Normandale Community College
 *27157 Inver Hills Community College
 *81001 University of Minnesota (Duluth)
 *81002 University of Minnesota (Twin Cities)
 81003 University of Minnesota (Morris)
 *81004 University of Minnesota -
 Crookston Technical College
 81037 Lakeland Medical Dental Academy
 *82009 Dunwoody Industrial Institute
 *82023 Minneapolis Business College
 *82034 Palmer Writers School, Inc.
 *82038 Rasmussen Business College
 *82039 Saint Cloud Business College
 *82064 Model College of Hair Design
 *82075 Saint Cloud Beauty College
 *82078 Vera Slater Beauty School

637 Alternative Education (Cont.)

*82080 Horst Education Center for
 Cosmetology
 *82082 John Robert Powers Modeling and
 Career School
 *83002 Crosier Seminary Junior College
 *83003 Golden Valley Lutheran College
 84001 Augsburg College
 84002 Bethel College and Seminary
 84003 Carleton College
 84004 Concordia College (Moorhead)
 84007 Gustavus Adolphus College
 84008 Hamline University
 84010 Macalester College
 *84011 Minneapolis College of Art and
 Design
 84014 Northwestern College
 *84016 College of Saint Benedict
 *84017 College of Saint Catherine
 84018 Saint John's University
 84019 Saint Mary's College
 *84020 Saint Olaf College
 *84022 College of Saint Scholastica
 *84023 College of Saint Teresa
 *84024 College of Saint Thomas
 *85002 Luther Northwestern Theological
 Seminary
 85005 United Theological Seminary of the
 Twin Cities
 85006 William Mitchell College of Law
 85008 Bethany Lutheran Theological Seminary
 85010 Northwestern College of Chiropractic

SCHOOL INDEX TO PROGRAMS

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

25001 Albert Lea Area Vocational Technical Institute

- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *278 Gas and Diesel Mechanics
- *287 Industrial Mechanics
- *288 Construction Trades
- *291 Drafting
- *295 Metalworking
- *297 Heating and Cooling
- *399 Food Service
- *631 Apprenticeship Programs
- *633 Basic Skills
- 637 Alternative Education

- *279 Small Engine Repair
- *281 Auto Body Repair
- *288 Construction Trades
- *291 Drafting
- *295 Metalworking
- *297 Heating and Cooling Mechanics
- *353 Nursing
- *366 Medical Assisting
- *367 Rehabilitation Services
- *371 Optical Services
- *387 Other Health Technologies
- *397 Child Development and Child Care
- *399 Food Service
- *565 Social Service
- *631 Apprenticeship Programs
- *633 Basic Skills
- *637 Alternative Education

25002 Alexandria Area Vocational Technical Institute

- *111 Agricultural Production and Service
- *122 Marine Technology
- *131 Architecture and Environmental Design
- *145 Business Management and Administration
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *161 Hotel and Motel Management
- *214 Data Processing
- *253 Engineering Technologies
- *271 Vehicle and Equipment Operation
- *272 Aviation Management
- *275 Aviation Maintenance
- *278 Gas and Diesel Mechanics
- *288 Construction Trades
- *291 Drafting
- *292 Electricity and Electronics Repair
- *295 Metalworking
- *318 Printing and Graphics
- *353 Nursing
- *383 Medical Laboratory Technologies
- *393 Dietetics
- *533 Science Technologies
- *567 Criminal Justice
- *631 Apprenticeship Programs
- *633 Basic Skills
- *637 Alternative Education

25004 Austin Area Vocational Technical Institute

- *111 Agricultural Production and Services
- *143 Banking and Finance
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *196 Communication Technologies
- *228 Hair Design
- *253 Engineering Technologies
- *278 Gas and Diesel Mechanics
- *281 Auto Body Repair
- *288 Construction Trades
- *295 Metalworking
- *318 Printing and Graphics
- *353 Nursing
- *631 Apprenticeship Programs
- *633 Basic Skills
- *637 Alternative Education

25003 Anoka Area Vocational Technical Institute

- *111 Agricultural Production and Service
- *115 Horticulture and Landscaping
- *146 Marketing and Sales
- *158 Secretarial Studies and Office Administration
- *163 Medical Records Administration
- *253 Engineering Technologies
- *272 Aviation Management
- *278 Gas and Diesel Mechanics

25005 Bemidji Area Vocational Technical Institute

- *145 Business Management and Administration
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *278 Gas and Diesel Mechanics
- *281 Auto Body Repair
- *288 Construction Trades
- *353 Nursing
- *358 Allied Dental Services
- *631 Apprenticeship Programs
- *637 Alternative Education

25006 Brainerd Area Vocational Technical Institute

- *115 Horticulture and Landscaping
- *118 Forestry and Natural Resources
- *143 Banking and Finance
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

- *221 Floral Design
- *226 Custodial Services
- *278 Gas and Diesel Mechanics
- *279 Small Engine Repair
- *281 Auto Body Repair
- *292 Electricity and Electronics Repair
- *295 Metalworking
- *353 Nursing
- *358 Allied Dental Services
- *399 Food Service
- *631 Apprenticeship Programs
- *633 Basic Skills
- *637 Alternative Education

25007 Canby Area Vocational Technical Institute

- *111 Agricultural Production and Services
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *278 Gas and Diesel Mechanics
- *288 Construction Trades
- *291 Drafting
- *295 Metalworking
- *318 Printing and Graphics
- *358 Allied Dental Services
- *399 Food Service
- *631 Apprenticeship Programs
- *637 Alternative Education

25008 Dakota County Area Vocational Technical Institute

- *115 Horticulture and Landscaping
- *131 Architectural and Environmental Design
- *145 Business Management and Administration
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *214 Data Processing
- *253 Engineering Technologies
- *271 Vehicle and Equipment Operation
- *278 Gas and Diesel Mechanics
- *281 Auto Body Repair
- *287 Industrial Mechanics
- *288 Construction Trades
- *289 Woodworking
- *291 Drafting
- *292 Electricity and Electronics Repair
- *295 Metalworking
- *317 Photographic Arts
- *318 Printing and Graphics
- *353 Nursing
- *399 Food Service

25009 Detroit Lakes Area Vocational Technical Institute

- *118 Forestry and Natural Resources
- *122 Marine Technologies

- *145 Business Management and Administration
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *278 Gas and Diesel Mechanics
- *279 Small Engine Repair
- *281 Auto Body Repair
- *287 Industrial Mechanics
- *288 Construction Trades
- *291 Drafting
- *295 Metalworking
- *311 Art
- *353 Nursing
- *399 Food Service
- *633 Basic Skills
- *637 Alternative Education

25010 Duluth Area Vocational Technical Institute

- *115 Horticulture and Landscaping
- *119 Forest Products
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *196 Communication Technologies
- *214 Data Processing
- *253 Engineering Technologies
- *278 Gas and Diesel Mechanics
- *281 Auto Body Repair
- *288 Construction Trades
- *291 Drafting
- *292 Electricity and Electronics Repair
- *295 Metalworking
- *353 Nursing
- *367 Rehabilitation Services
- *383 Medical Laboratory Technologies
- *399 Food Service
- *631 Apprenticeship Programs

25011 Eveleth Area Vocational Technical Institute

- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *278 Gas and Diesel Mechanics
- *287 Industrial Mechanics
- *288 Construction Trades
- *295 Metalworking
- *298 Precision Production Work
- *318 Printing and Graphics
- *353 Nursing
- *371 Optical Services
- *637 Alternative Education

25012 Faribault Area Vocational Technical Institute

- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

- *226 Custodial Services
- *253 Engineering Technologies
- *279 Small Engine Repair
- *288 Construction Trades
- *291 Drafting
- *295 Metalworking
- *353 Nursing
- *383 Medical Laboratory Technologies
- *565 Social Service
- *633 Basic Skills
- *637 Alternative Education

25013 Granite Falls Area Vocational Technical Institute

- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *253 Engineering Technologies
- *281 Auto Body Repair
- *291 Drafting
- *295 Metalworking
- *371 Optical Services
- *533 Science Technologies
- *637 Alternative Education

25014 Hibbing Area Vocational Technical Institute

- *146 Marketing and Sales
- *253 Engineering Technologies
- *278 Gas and Diesel Mechanics
- *287 Industrial Mechanics
- *292 Electricity and Electronics Repair
- *295 Metalworking
- *353 Nursing
- *358 Allied Dental Services
- *383 Medical Laboratory Technologies
- *395 Textiles and Clothing
- *399 Food Service
- *567 Criminal Justice
- *631 Apprenticeship Programs

25015 Hutchinson Area Vocational Technical Institute

- *111 Agricultural Production and Service
- *112 Animal Sciences
- *146 Marketing and Sales
- *158 Secretarial Studies and Office Administration
- *253 Engineering Technologies
- *278 Gas and Diesel Mechanics
- *279 Small Engine Repair
- *291 Drafting
- *292 Electricity and Electronics Repair
- *295 Metalworking
- *565 Social Service

25016 Jackson Area Vocational Technical Institute

- *111 Agricultural Production and Service
- *113 Soil and Plant Science
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *196 Communications Technologies
- *253 Engineering Technologies
- *278 Gas and Diesel Mechanics
- *281 Auto Body Repair
- *288 Construction Trades
- *291 Drafting
- *292 Electricity and Electronics Repair
- *353 Nursing

25017 Mankato Area Vocational Technical Institute

- *111 Agricultural Production and Service
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *214 Data Processing
- *253 Engineering Technologies
- *278 Gas and Diesel Mechanics
- *281 Auto Body Repair
- *291 Drafting
- *292 Electricity and Electronics Repair
- *295 Metalworking
- *297 Heating and Cooling
- *318 Printing and Graphics
- *353 Nursing
- *367 Rehabilitation Services
- *399 Food Service
- *565 Social Service
- *637 Alternative Education

25018 Minneapolis Technical Institute

- *145 Business Management and Administration
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *214 Data Processing
- *223 Upholstering and Leatherworking
- *228 Hair Design
- *253 Engineering Technologies
- *275 Aviation Maintenance
- *278 Gas and Diesel Mechanics
- *288 Construction Trades
- *289 Woodworking
- *291 Drafting
- *295 Metalworking
- *298 Precision Production Work
- *318 Printing and Graphics
- *353 Nursing
- *395 Textiles and Clothing
- *399 Food Service
- *631 Apprenticeship Programs
- *637 Alternative Education

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

25019 Moorhead Area Vocational Technical Institute

- *111 Agricultural Production and Service
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *163 Medical Records Administration
- *214 Data Processing
- *253 Engineering Technologies
- *278 Gas and Diesel Mechanics
- *288 Construction Trades
- *291 Drafting
- *295 Metalworking
- *297 Heating and Cooling
- *318 Printing and Graphics
- *399 Food Service
- *631 Apprenticeship Programs
- *633 Basic Skills
- *637 Alternative Education

25020 Pine Technical Institute

- *111 Agricultural Production and Service
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *214 Data Processing
- *278 Gas and Diesel Mechanics
- *283 Instrument Repair
- *295 Metalworking
- *637 Alternative Education

25021 Pipestone Area Vocational Technical Institute

- *111 Agricultural Production and Service
- *143 Banking and Finance
- *146 Marketing and Sales
- *157 Accounting
- *278 Gas and Diesel Mechanics
- *288 Construction Trades
- *298 Precision Production Work
- *395 Textiles and Clothing
- *399 Food Service
- *631 Apprenticeship Programs
- *633 Basic Skills
- *637 Alternative Education

25022 916 Area Vocational Technical Institute

- *115 Horticulture and Landscaping
- *143 Banking and Finance
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *196 Communication Technologies
- *214 Data Processing

- *223 Upholstering and Leatherworking
- *226 Custodial Services
- *228 Hair Design
- *253 Engineering Technologies
- *271 Vehicle and Equipment Operation
- *278 Gas and Diesel Mechanics
- *279 Small Engine Repair
- *281 Auto Body Repair
- *291 Drafting
- *292 Electricity and Electronics Repair
- *295 Metalworking
- *297 Heating and Cooling
- *318 Printing and Graphics
- *353 Nursing
- *358 Allied Dental Services
- *366 Medical Assisting
- *367 Rehabilitation Services
- *381 Emergency Medical Care
- *393 Dietetics
- *395 Textiles and Clothing
- *397 Child Development and Child Care
- *399 Food Service
- *533 Science Technologies
- *631 Apprenticeship Programs
- *637 Alternative Education

25023 Rochester Area Vocational Technical Institute

- *115 Horticulture and Landscaping
- *143 Banking and Finance
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *163 Medical Records Administration
- *253 Engineering Technologies
- *278 Gas and Diesel Mechanics
- *288 Construction Trades
- *291 Drafting
- *295 Metalworking
- *297 Heating and Cooling
- *353 Nursing
- *358 Allied Dental Services
- *387 Other Health Technologies
- *397 Child Development and Child Care
- *399 Food Service
- *533 Science Technologies
- *565 Social Service
- *631 Apprenticeship Programs
- *637 Alternative Education

25024 Saint Cloud Area Vocational Technical Institute

- *111 Agricultural Production and Service
- *146 Marketing and Sales
- *147 Real Estate
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *193 Journalism and Communication
- *214 Data Processing
- *253 Engineering Technologies
- *278 Gas and Diesel Mechanics
- *281 Auto Body Repair
- *288 Construction Trades

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

- *291 Drafting
- *292 Electricity and Electronics Repair
- *295 Metalworking
- *297 Heating and Cooling
- *298 Precision Production Work
- *318 Printing and Graphics
- *353 Nursing
- *358 Allied Dental Services
- *371 Optical Services
- *387 Other Health Technologies
- *397 Child Development and Child Care
- *399 Food Service
- *533 Science Technologies
- *631 Apprenticeship Programs
- *633 Basic Skills
- *637 Alternative Education

25025 Saint Paul Area Vocational Technical Institute

- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *163 Medical Records Administration
- *193 Journalism and Communications
- *214 Data Processing
- *228 Hair Design
- *253 Engineering Technologies
- *271 Vehicle and Equipment Operation
- *278 Gas and Diesel Mechanics
- *281 Auto Body Repair
- *283 Instrument Repair
- *288 Construction Trades
- *289 Woodworking
- *291 Drafting
- *295 Metalworking
- *318 Printing and Graphics
- *353 Nursing
- *385 Medical Laboratory Technologies
- *387 Other Health Technologies
- *395 Textiles and Clothing
- *399 Food Service
- *631 Apprenticeship Programs
- *637 Alternative Education

25026 Staples Area Vocational Technical Institute

- *111 Agricultural Production and Service
- *118 Forestry and Natural Resources
- *158 Secretarial Studies and Office Administration
- *271 Vehicle and Equipment Operation
- *278 Gas and Diesel Mechanics
- *287 Industrial Mechanics
- *288 Construction Trades
- *291 Drafting
- *295 Metalworking
- *318 Printing and Graphics
- *399 Food Service
- *631 Apprenticeship Programs
- *637 Alternative Education

25027 Hennepin Technical Centers

- *111 Agricultural Production and Service
- *112 Animal Sciences
- *115 Horticulture and Landscaping
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *163 Medical Records Administration
- *196 Communication Technologies
- *214 Data Processing
- *221 Floral Design
- *228 Hair Design
- *253 Engineering Technologies
- *278 Gas and Diesel Mechanics
- *279 Small Engine Repair
- *281 Auto Body Repair
- *287 Industrial Mechanics
- *288 Construction Trades
- *289 Woodworking
- *291 Drafting
- *292 Electricity and Electronics Repair
- *295 Metalworking
- *297 Heating and Cooling
- *298 Precision Production Work
- *317 Photographic Arts
- *318 Printing and Graphics
- *353 Nursing
- *358 Allied Dental Services
- *397 Child Development and Child Care
- *399 Food Service
- *533 Science Technologies
- *631 Apprenticeship Programs
- *633 Basic Skills
- *637 Alternative Education

25028 Thief River Falls Area Vocational Technical Institute

- *111 Agricultural Production and Service
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *196 Communication Technologies
- *228 Hair Design
- *253 Engineering Technologies
- *275 Aviation Maintenance
- *278 Gas and Diesel Mechanics
- *281 Auto Body Repair
- *288 Construction Trades
- *291 Drafting
- *295 Metalworking
- *353 Nursing
- *631 Apprenticeship Programs
- *633 Basic Skills
- *637 Alternative Education

25029 Wadena Area Vocational Technical Institute

- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

- *193 Journalism and Communication
- *228 Hair Design
- *253 Engineering Technologies
- *278 Gas and Diesel Mechanics
- *281 Auto Body Repair
- *288 Construction Trades
- *292 Electricity and Electronics Repair
- *633 Basic Skills
- *637 Alternative Education

25030 Willmar Area Vocational Technical Institute

- *111 Agricultural Production and Service
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *228 Hair Design
- *253 Engineering Technologies
- *278 Gas and Diesel Mechanics
- *281 Auto Body Repair
- *288 Construction Trades
- *291 Drafting
- *292 Electricity and Electronics Repair
- *295 Metalworking
- *317 Photographic Arts
- *318 Printing and Graphics
- *353 Nursing
- *366 Medical Assisting
- *399 Food Service
- *565 Social Service
- *631 Apprenticeship Programs
- *633 Basic Skills
- *637 Alternative Education

25031 Winona Area Vocational Technical Institute

- *111 Agricultural Production and Service
- *146 Marketing and Sales
- *158 Secretarial Studies and Office Administration
- *228 Hair Design
- *275 Aviation Maintenance
- *278 Gas and Diesel Mechanics
- *279 Small Engine Repair
- *281 Auto Body Repair
- *288 Construction Trades
- *291 Drafting
- *292 Electricity and Electronics Repair
- *295 Metalworking
- *353 Nursing
- *631 Apprenticeship Programs
- *633 Basic Skills
- *637 Alternative Education

25032 East Grand Forks Area Vocational Technical Institute

- *111 Agricultural Production and Service
- *143 Banking and Finance
- *146 Marketing and Sales
- *158 Secretarial Studies and Office Administration

- *163 Medical Records Administration
- *271 Vehicle and Equipment Operation
- *278 Gas and Diesel Mechanics
- *288 Construction Trades
- *295 Metalworking
- *353 Nursing
- *366 Medical Assisting
- *383 Medical Laboratory Technologies
- *387 Other Health Technologies
- *631 Apprenticeship Programs
- *633 Basic Skills
- *637 Alternative Education

25033 Red Wing Area Vocational Technical Institute

- *111 Agricultural Production and Service
- *143 Banking and Finance
- *158 Secretarial Studies and Office Administration
- *214 Data Processing
- *253 Engineering Technologies
- *271 Vehicle and Equipment Operation
- *278 Gas and Diesel Mechanics
- *283 Instrument Repair
- *287 Industrial Mechanics
- *295 Metalworking
- *297 Heating and Cooling
- *353 Nursing
- *631 Apprenticeship Programs
- *633 Basic Skills
- *637 Alternative Education

26070 Bemidji State University

- *145 Business Management and Administration
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- 193 Journalism and Communications
- 211 Computer and Information Science
- 231 Education Administration
- 234 Early Childhood and Elementary Education
- 235 Health and Physical Education
- 236 Secondary Education
- 311 Art
- 314 Music
- 316 Dramatic Arts
- *318 Printing and Graphics
- 383 Medical Laboratory Technologies
- 441 English and Literature
- 443 Speech
- 445 Foreign Languages
- 448 Liberal Studies
- 481 Mathematics
- 521 General Physical Science
- 524 Chemistry
- 526 Geology
- 529 Physics
- 531 Life Sciences
- 541 Psychology
- 565 Social Service
- *567 Criminal Justice
- 581 General Social Science
- 583 Economics

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

584 Geography
585 History
586 Political Science
587 Sociology
588 Area and Ethnic Studies
591 Philosophy
*637 Alternative Education

26071 Mankato State University

145 Business Management and Administration
157 Accounting
*158 Secretarial Studies and Office Administration
193 Journalism and Communications
211 Computer and Information Science
231 Education Administration
234 Early Childhood and Elementary Education
235 Health and Physical Education
236 Secondary Education
237 Special Education
238 Counseling
*253 Engineering Technologies
311 Art
314 Music
316 Dramatic Arts
353 Nursing
*358 Allied Dental Services
367 Rehabilitation Services
368 Speech Pathology and Audiology
376 Public Health
*381 Emergency Medical Care
*383 Medical Laboratory Technologies
391 Home Economics
441 English and Literature
443 Speech
445 Foreign Languages
*448 Liberal Studies
461 Library Science
481 Mathematics
521 General Physical Science
522 Astronomy
524 Chemistry
526 Geology
529 Physics
531 Life Sciences
*533 Science Technologies
541 Psychology
562 Public Administration
564 Recreation
565 Social Service
*567 Criminal Justice
581 General Social Science
582 Anthropology
583 Economics
584 Geography
585 History
586 Political Science
587 Sociology
588 Area and Ethnic Studies
591 Philosophy
*637 Alternative Education

26072 Moorhead State University

*145 Business Management and Administration
*146 Marketing and Sales
*157 Accounting
158 Secretarial Studies and Office Administration
161 Hotel and Motel Management
193 Journalism and Communications
211 Computer and Information Science
234 Early Childhood and Elementary Education
235 Health and Physical Education
236 Secondary Education
237 Special Education
238 Counseling
*253 Engineering Technologies
291 Drafting
311 Art
314 Music
316 Dramatic Arts
353 Nursing
367 Rehabilitation Services
368 Speech Pathology and Audiology
376 Public Health
383 Medical Laboratory Technologies
421 Law
441 English and Literature
443 Speech
445 Foreign Languages
*448 Liberal Studies
481 Mathematics
524 Chemistry
526 Geology
529 Physics
531 Life Sciences
*533 Science Technologies
541 Psychology
565 Social Service
567 Criminal Justice
581 General Social Science
582 Anthropology
583 Economics
584 Geography
585 History
586 Political Science
587 Sociology
588 Area and Ethnic Studies
591 Philosophy
*637 Alternative Education

26073 Saint Cloud State University

*118 Forestry and Natural Resources
143 Banking and Finance
145 Business Management and Administration
146 Marketing and Sales
147 Real Estate
157 Accounting
*158 Secretarial Studies and Office Administration
193 Journalism and Communications
*196 Communication Technologies
211 Computer and Information Science
231 Education Administration
234 Early Childhood and Elementary Education
*235 Health and Physical Education
236 Secondary Education
237 Special Education

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

238 Counseling
251 Engineering
*253 Engineering Technologies
*287 Industrial Mechanics
311 Art
314 Music
316 Dramatic Arts
367 Rehabilitation Services
368 Speech Pathology and Audiology
383 Medical Laboratory Technologies
385 Radiologic Technology
441 English and Literature
443 Speech
445 Foreign Languages
448 Liberal Studies
461 Library Science
481 Mathematics
521 General Physical Science
524 Chemistry
529 Physics
531 Life Sciences
541 Psychology
562 Public Administration
565 Social Service
567 Criminal Justice
581 General Social Science
582 Anthropology
583 Economics
584 Geography
585 History
586 Political Science
587 Sociology
588 Area and Ethnic Studies
591 Philosophy
*637 Alternative Education

26074 Winona State University

145 Business Management and Administration
157 Accounting
*158 Secretarial Studies and Office Administration
193 Journalism and Communications
211 Computer and Information Science
231 Education Administration
234 Early Childhood and Elementary Education
235 Health and Physical Education
236 Secondary Education
237 Special Education
238 Counseling
311 Art
314 Music
316 Dramatic Arts
353 Nursing
367 Rehabilitation Services
368 Speech Pathology and Audiology
376 Public Health
383 Medical Laboratory Technologies
421 Law
441 English and Literature
443 Speech
445 Foreign Languages
*448 Liberal Studies
481 Mathematics
521 General Physical Science
524 Chemistry
526 Geology
529 Physics
531 Life Sciences

541 Psychology
562 Public Administration
564 Recreation
581 General Social Science
583 Economics
584 Geography
585 History
586 Political Science
587 Sociology
*637 Alternative Education

26175 Southwest State University

*116 Agricultural Business and Management
*145 Business Management and Administration
*146 Marketing and Sales
*157 Accounting
*158 Secretarial Studies and Office Administration
161 Hotel and Motel Management
162 Health Care Administration
196 Communication Technologies
234 Early Childhood and Elementary Education
235 Health and Physical Education
236 Secondary Education
*253 Engineering Technologies
311 Art
314 Music
316 Dramatic Arts
383 Medical Laboratory Technologies
441 English and Literature
443 Speech
448 Liberal Studies
481 Mathematics
521 General Physical Science
524 Chemistry
526 Geology
529 Physics
531 Life Sciences
541 Psychology
585 History
587 Sociology
*637 Alternative Education

26176 Metropolitan State University

143 Banking and Finance
145 Business Management and Administration
146 Marketing and Sales
147 Real Estate
157 Accounting
193 Journalism and Communications
196 Communication Technologies
214 Data Processing
235 Health and Physical Education
311 Art
314 Music
316 Dramatic Arts
317 Photographic Arts
353 Nursing
376 Public Health
441 English and Literature
443 Speech
445 Foreign Languages
448 Liberal Studies

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

461 Library Science
481 Mathematics
541 Psychology
562 Public Administration
564 Recreation
565 Social Service
567 Criminal Justice
581 General Social Science
582 Anthropology
583 Economics
584 Geography
585 History
586 Political Science
587 Sociology
588 Area and Ethnic Studies
591 Philosophy
592 Religion
631 Apprenticeship Programs
637 Alternative Education

27139 Austin Community College

*111 Agricultural Production and Service
*146 Marketing and Sales
*158 Secretarial Studies and Office Administration
*353 Nursing
*448 Liberal Studies
*565 Social Service
*637 Alternative Education

27140 Brainerd Community College

*353 Nursing
*397 Child Development and Child Care
*567 Criminal Justice
*631 Apprenticeship Programs
*637 Alternative Education

27142 Fergus Falls Community College

*145 Business Management and Administration
*146 Marketing and Sales
*157 Accounting
*158 Secretarial Studies and Office Administration
*353 Nursing
*383 Medical Laboratory Technologies
*387 Other Health Technologies
*637 Alternative Education

27143 Hibbing Community College

*158 Secretarial Studies and Office Administration
*291 Drafting
*353 Nursing
*383 Medical Laboratory Technologies
*448 Liberal Studies

27144 Itasca Community College

*119 Forest Products
*146 Marketing and Sales
*157 Accounting
*158 Secretarial Studies and Office Administration
*238 Counseling
*295 Metalworking
*353 Nursing
*448 Liberal Studies
*637 Alternative Education

27145 Willmar Community College

*353 Nursing
*385 Radiological Technology
*448 Liberal Studies
*521 General Physical Science
*565 Social Service
*567 Criminal Justice
*631 Apprenticeship Programs
*637 Alternative Education

27146 Worthington Community College

*111 Agricultural Production and Service
*145 Business Management and Administration
*158 Secretarial Studies and Office Administration
*353 Nursing
*565 Social Service
*631 Apprenticeship Programs
*637 Alternative Education

27147 Vermilion Community College

*118 Forestry and Natural Resources
*157 Accounting
*158 Secretarial Studies and Office Administration
*253 Engineering Technologies
*367 Rehabilitation Services
*564 Recreation
*637 Alternative Education

27148 Rochester Community College

*145 Business Management and Administration
*146 Marketing and Sales
*158 Secretarial Studies and Office Administration
*193 Journalism and Communications
*253 Engineering Technologies
*291 Drafting
*353 Nursing
*385 Radiological Technology

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

- *387 Other Health Technologies
- *395 Clothing and Textiles
- *448 Liberal Studies
- *567 Criminal Justice
- *637 Alternative Education

27149 Northland Community College

- *145 Business Management and Administration
- *353 Nursing
- *448 Liberal Studies
- *567 Criminal Justice
- *631 Apprenticeship Programs
- *637 Alternative Education

27150 Mesabi Community College

- *146 Marketing and Sales
- *158 Secretarial Studies and Office Administration
- *448 Liberal Studies
- *565 Social Service
- *567 Criminal Justice
- *637 Alternative Education

27151 Minneapolis Community College

- *238 Counseling
- *275 Aviation Maintenance
- *291 Drafting
- *292 Electricity and Electronics Repair
- *318 Printing and Graphics
- *353 Nursing
- *383 Medical Laboratory Technologies
- *397 Child Development and Child Care
- *565 Social Service
- *567 Criminal Justice

27152 Anoka-Ramsey Community College

- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *163 Medical Records Administration
- *253 Engineering Technologies
- *272 Aviation Management
- *353 Nursing
- *367 Rehabilitation Services
- *387 Other Health Technologies
- *448 Liberal Studies
- *631 Apprenticeship Programs
- *637 Alternative Education

27153 North Hennepin Community College

- *145 Business Management and Administration
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *163 Medical Records Administration
- *253 Engineering Technologies
- *287 Industrial Mechanics
- *288 Construction Trades
- *298 Precision Production Work
- *318 Printing and Graphics
- *353 Nursing
- *358 Allied Dental Services
- *387 Other Health Technologies
- *421 Law
- *565 Social Service
- *567 Criminal Justice
- *633 Basic Skills
- *637 Alternative Education

27154 Lakewood Community College

- *145 Business Management and Administration
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *214 Data Processing
- *238 Counseling
- *318 Printing and Graphics
- *353 Nursing
- *393 Dietetics
- *397 Child Development and Child Care
- *448 Liberal Studies
- *565 Social Service
- *567 Criminal Justice
- 611 Military Studies
- *637 Alternative Education

27155 Rainy River Community College

- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *279 Small Engine Repair
- *353 Nursing
- *448 Liberal Studies
- *637 Alternative Education

27156 Normandale Community College

- *145 Business Management and Administration
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *161 Hotel and Motel Management

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

- *214 Data Processing
- *253 Engineering Technologies
- *291 Drafting
- *353 Nursing
- *358 Allied Dental Services
- *366 Medical Assisting
- *393 Dietetics
- *448 Liberal Studies
- *567 Criminal Justice
- *631 Apprenticeship Programs
- *637 Alternative Education

- 541 Psychology
- 565 Social Service
- *567 Criminal Justice
- 581 General Social Science
- 582 Anthropology
- 583 Economics
- 584 Geography
- 585 History
- 586 Political Science
- 587 Sociology
- 591 Philosophy
- 611 Military Studies
- *637 Alternative Education

27157 Inver Hills Community College

- *143 Banking and Finance
- *145 Business Management and Administration
- *146 Marketing and Sales
- *147 Real Estate
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *162 Health Care Administration
- *253 Engineering Technologies
- *272 Aviation Management
- *288 Construction Trades
- *318 Printing and Graphics
- *353 Nursing
- *385 Radiological Technology
- *421 Law
- *448 Liberal Studies
- *565 Social Service
- *567 Criminal Justice
- 611 Military Studies
- *633 Basic Skills
- *637 Alternative Education

81001 University of Minnesota (Duluth)

- 145 Business Management and Administration
- 157 Accounting
- 193 Journalism and Communications
- 211 Computer and Information Science
- 231 Education Administration
- 234 Early Childhood and Elementary Education
- 235 Health and Physical Education
- 236 Secondary Education
- 237 Special Education
- *238 Counseling
- 253 Engineering Technologies
- 311 Art
- 314 Music
- 316 Dramatic Arts
- *358 Allied Dental Services
- 367 Rehabilitation Services
- 391 Home Economics
- 441 English and Literature
- 443 Speech
- 445 Foreign Languages
- 448 Liberal Studies
- 481 Mathematics
- 524 Chemistry
- 526 Geology
- 529 Physics
- 531 Life Sciences

81002 University of Minnesota (Twin Cities)

- 111 Agricultural Production and Service
- 112 Animal Sciences
- 113 Soil and Plant Sciences
- 114 Food Science and Technology
- 115 Horticulture and Landscaping
- 116 Agricultural Business and Management
- 118 Forestry and Natural Resources
- 119 Forest Products
- 121 Fisheries and Wildlife Sciences
- 131 Architecture and Environmental Design
- *145 Business Management and Administration
- *146 Marketing and Sales
- *157 Accounting
- 193 Journalism and Communications
- 196 Communication Technologies
- *211 Computer and Information Science
- 229 Funeral Services
- 231 Education Administration
- 234 Early Childhood and Elementary Education
- 235 Health and Physical Education
- 236 Secondary Education
- 237 Special Education
- *238 Counseling
- 251 Engineering
- *253 Engineering Technologies
- *274 Flight Training
- *311 Art
- 314 Music
- 315 Dance
- 316 Dramatic Arts
- 317 Photographic Arts
- 353 Nursing
- 357 Dentistry
- *358 Allied Dental Services
- 363 Medicine
- 367 Rehabilitation Services
- 372 Pharmacy
- 376 Public Health
- 378 Veterinary Medicine
- 383 Medical Laboratory Technologies
- *385 Radiological Technology
- *387 Other Health Technologies
- 391 Home Economics
- 393 Dietetics
- 395 Textiles and Clothing
- *397 Child Development and Child Care
- *421 Law
- 441 English and Literature
- 443 Speech
- 445 Foreign Languages

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

- *448 Liberal Studies
- 461 Library Science
- 481 Mathematics
- *521 General Physical Science
- 522 Astronomy
- 524 Chemistry
- 526 Geology
- 529 Physics
- 531 Life Sciences
- 541 Psychology
- 562 Public Administration
- 564 Recreation
- *565 Social Service
- *567 Criminal Justice
- *569 Fire Control
- 582 Anthropology
- 583 Economics
- 584 Geography
- 585 History
- 586 Political Science
- 587 Sociology
- 588 Area and Ethnic Studies
- 591 Philosophy
- 592 Religion
- 595 Theology
- 611 Military Studies
- *637 Alternative Education

- *118 Forestry and Natural Resources
- *145 Business Management and Administration
- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *161 Hotel and Motel Management
- *193 Journalism and Communications
- *214 Data Processing
- *224 Animal Grooming and Training
- *226 Custodial Services
- *236 Secondary Education
- *253 Engineering Technologies
- *274 Flight Training
- *391 Home Economics
- *399 Food Service
- *448 Liberal Studies
- *564 Recreation
- *565 Social Service
- *631 Apprenticeship Programs
- *637 Alternative Education

81003 University of Minnesota (Morris)

- 145 Business Management and Administration
- 234 Early Childhood and Elementary Education
- 235 Health and Physical Education
- 236 Secondary Education
- 311 Art
- 314 Music
- 316 Dramatic Arts
- 441 English and Literature
- 443 Speech
- 445 Foreign Languages
- 481 Mathematics
- 524 Chemistry
- 526 Geology
- 529 Physics
- 531 Life Sciences
- 541 Psychology
- 565 Social Service
- 581 General Social Science
- 583 Economics
- 585 History
- 586 Political Science
- 587 Sociology
- 588 Area and Ethnic Studies
- 591 Philosophy
- 637 Alternative Education

- *111 Agricultural Production and Service
- *113 Soil and Plant Sciences
- *114 Food Science and Technology
- *115 Horticulture and Landscaping
- *116 Agricultural Business and Management
- *146 Marketing and Sales
- *158 Secretarial Studies and Office Administration
- *193 Journalism and Communications
- *238 Counseling
- *379 Allied Veterinary Services
- *391 Home Economics
- *564 Recreation
- *565 Social Service
- *631 Apprenticeship Programs

81004 University of Minnesota - Crookston Technical College

- *111 Agricultural Production and Service
- *112 Animal Sciences
- *113 Soil and Plant Sciences
- *115 Horticulture and Landscaping
- *116 Agricultural Business and Management

81005 University of Minnesota - Waseca Technical College

81006 Mayo Graduate School of Medicine

- 357 Dentistry
- 363 Medicine
- 531 Life Sciences

81037 Lakeland Medical-Dental Academy

- *163 Medical Records Administration
- *358 Allied Dental Services
- *366 Medical Assisting
- *383 Medical Laboratory Technologies
- 637 Alternative Education

82001 Academy of Accountancy

- *157 Accounting

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

82002 Art Instruction Schools, Inc.

*311 Art

82021 McConnell School

*158 Secretarial Studies and Office Administration

82005 Brown Institute

*193 Journalism and Communications
*253 Engineering Technologies
*292 Electricity and Electronics Repair

82022 Medical Institute of Minnesota

*358 Allied Dental Services
*366 Medical Assisting
*379 Allied Veterinary Medicine
*383 Medical Laboratory Technologies

82006 Control Data Institute

*214 Data Processing

82023 Minneapolis Business College

*157 Accounting
*158 Secretarial Studies and Office Administration
*637 Alternative Education

82008 Duluth Business University

*157 Accounting
*158 Secretarial Studies and Office Administration

82024 Minneapolis Drafting School

*291 Drafting

82009 Dunwoody Industrial Institute

*253 Engineering Technologies
*278 Gas and Diesel Mechanics
*281 Auto Body Repair
*288 Construction Trades
*291 Drafting
*292 Electricity and Electronics Repair
*295 Metalworking
*297 Heating and Cooling
*318 Printing and Graphics
*399 Food Service
*631 Apprenticeship Programs
*637 Alternative Education

82025 Minnesota Institute of Medical and Dental Assisting

*158 Secretarial Studies and Office Administration
*358 Allied Dental Services
*366 Medical Assisting

82014 Globe College of Business

*146 Marketing and Sales
*157 Accounting
*158 Secretarial Studies and Office Administration
*214 Data Processing

82026 Minnesota School of Bartending

*399 Food Service

82015 H & R Block, Inc.

*157 Accounting

82027 Minnesota School of Business

*145 Business Management and Administration
*146 Marketing and Sales
*157 Accounting
*158 Secretarial Studies and Office Administration
*214 Data Processing
*253 Engineering Technologies
*292 Electricity and Electronics Repair

82028 Minnesota School of Real Estate, Inc.

*147 Real Estate

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

82030 Northern Technical School of Business

- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *214 Data Processing

82032 Northwest Technical Institute

- *291 Drafting

82033 Northwestern Electronics Institute

- *292 Electricity and Electronics Repair

82034 Palmer Writers School, Inc.

- *637 Alternative Education

82035 Louthian College

- *146 Marketing and Sales

82038 Rasmussen School of Business

- *146 Marketing and Sales
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *214 Data Processing
- *637 Alternative Education

82039 Saint Cloud Business College

- *145 Business Management and Administration
- *157 Accounting
- *158 Secretarial Studies and Office Administration
- *637 Alternative Education

82042 Stratford School

- *158 Secretarial Studies and Office Administration
- *366 Medical Assisting

82043 Sears Discovery Studio

- 319 Modeling

82048 Cosmetology Training Centers LTD (Saint Paul)

- *228 Hair Design

82049 Arrowhead Beauty College

- *228 Hair Design

82051 Brooks Beauty School

- *228 Hair Design

82052 Brooks School of Barbering

- *228 Hair Design

82054 Michael's School of Cosmetology

- *228 Hair Design

82055 Duluth Academy of Hair Design

- *228 Hair Design

82056 Florian School of Cosmetology

- *228 Hair Design

82057 Glamour Beauty Academy

- *228 Hair Design

82058 Hibbing Beauty College

- *228 Hair Design

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

82059 Minnesota Beauty College

*228 Hair Design

82060 Cosmetology Training Center (Mankato)

*228 Hair Design

82061 Maxims Beauty Academy

*228 Hair Design

82062 Hastings College of Hair Design

*228 Hair Design

82063 Cosmetology Training Centers LTD (Mpls.)

*228 Hair Design

82064 Model College of Hair Design

*227 Personal Services
*228 Hair Design
*637 Alternative Education

82065 Moler Barber School

*228 Hair Design

82066 Oliver Thein Beauty School

*228 Hair Design

82068 Cosmetology Training Center (Faribault)

*228 Hair Design

82069 Ritter-Fergus Falls School of Beauty

*228 Hair Design

82070 Richfield Beauty School

*228 Hair Design

82071 Rita's Moorhead School of Beauty

*228 Hair Design

82072 Ritter Saint Paul Beauty College

*228 Hair Design

82073 Robinson's Beauty College

*228 Hair Design

82074 Cosmetology Training Centers LTD (Rochester)

*228 Hair Design

82075 Saint Cloud Beauty College

*227 Personal Services
*228 Hair Design
*637 Alternative Education

82076 Hairdresser's Educational Center

*228 Hair Design

82077 Fern's Beauty School

*228 Hair Design

82078 Vera Slater Beauty School

*228 Hair Design
*637 Alternative Education

82079 Virginia School of Beauty Culture, Inc.

*228 Hair Design

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

82080 Horst Education Center for Cosmetology

- *228 Hair Design
- *637 Alternative Education

83002 Croster Seminary Junior College

- *448 Liberal Studies
- *637 Alternative Education

82082 John Robert Powers Modeling and Career School

- *158 Secretarial Studies and Office Administration
- *319 Modeling
- *637 Alternative Education

83003 Golden Valley Lutheran College

- *158 Secretarial Studies and Office Administration
- *214 Data Processing
- *448 Liberal Studies
- *565 Social Service
- *592 Religion
- *595 Theology
- *637 Alternative Education

82083 Security Schools, Inc.

- *146 Marketing and Sales
- *147 Real Estate

83004 Saint Mary's Junior College

- *163 Medical Records Administration
- *214 Data Processing
- *237 Special Education
- *238 Counseling
- *353 Nursing
- *367 Rehabilitation Services
- *383 Medical Laboratory Technologies
- *387 Other Health Technologies
- *565 Social Service

82085 Saint Paul Barber School

- *228 Hair Design

82086 Scot-Lewis Florian Scientific School of Cosmetology

- *228 Hair Design

84001 Augsburg College

- 145 Business Management and Administration
- 193 Journalism and Communications
- 234 Early Childhood and Elementary Education
- 235 Health and Physical Education
- 236 Secondary Education
- 311 Art
- 314 Music
- 316 Dramatic Arts
- 353 Nursing
- 383 Medical Laboratory Technologies
- 441 English and Literature
- 443 Speech
- 445 Foreign Languages
- 448 Liberal Studies
- 481 Mathematics
- 524 Chemistry
- 529 Physics
- 531 Life Sciences
- 541 Psychology
- 565 Social Service
- 583 Economics
- 585 History
- 586 Political Science
- 587 Sociology
- 588 Area and Ethnic Studies
- 591 Philosophy
- 592 Religion
- 637 Alternative Education

82087 School of Communication Arts

- *196 Communication Technologies
- *317 Photographic Arts

82111 L'Hotel Sofitel School of French Culinary Skills

- *399 Food Service

83001 Bethany Lutheran Junior College

- *158 Secretarial Studies and Office Administration
- *448 Liberal Studies
- *565 Social Service
- *592 Religion
- *595 Theology

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

84002 Bethel College and Seminary

145 Business Management and Administration
211 Computer and Information Science
234 Early Childhood and Elementary Education
235 Health and Physical Education
236 Secondary Education
311 Art
314 Music
316 Dramatic Arts
353 Nursing
383 Medical Laboratory Technologies
441 English and Literature
443 Speech
445 Foreign Languages
448 Liberal Studies
481 Mathematics
524 Chemistry
529 Physics
531 Life Sciences
541 Psychology
565 Social Service
582 Anthropology
583 Economics
585 History
586 Political Science
587 Sociology
591 Philosophy
592 Religion
595 Theology
637 Alternative Education

162 Health Care Administration
193 Journalism and Communications
214 Data Processing
234 Early Childhood and Elementary Education
235 Health and Physical Education
236 Secondary Education
311 Art
314 Music
316 Dramatic Arts
383 Medical Laboratory Technologies
391 Home Economics
441 English and Literature
443 Speech
445 Foreign Languages
448 Liberal Studies
481 Mathematics
521 General Physical Science
524 Chemistry
529 Physics
531 Life Sciences
541 Psychology
564 Recreation
565 Social Service
581 General Social Science
583 Economics
585 History
586 Political Science
587 Sociology
591 Philosophy
592 Religion
611 Military Studies
637 Alternative Education

84003 Carleton College

236 Secondary Education
311 Art
314 Music
441 English and Literature
445 Foreign Languages
448 Liberal Studies
481 Mathematics
524 Chemistry
526 Geology
529 Physics
531 Life Sciences
541 Psychology
582 Anthropology
583 Economics
585 History
586 Political Science
587 Sociology
588 Area and Ethnic Studies
591 Philosophy
595 Theology
637 Alternative Education

84005 Concordia College (Saint Paul)

118 Forestry and Natural Resources
145 Business Management and Administration
231 Education Administration
234 Early Childhood and Elementary Education
235 Health and Physical Education
236 Secondary Education
311 Art
314 Music
*397 Child Development and Child Care
441 English and Literature
445 Foreign Languages
448 Liberal Studies
481 Mathematics
521 General Physical Science
531 Life Sciences
581 General Social Science
585 History
592 Religion

84006 Dr. Martin Luther College

234 Early Childhood and Elementary Education

84004 Concordia College (Moorhead)

145 Business Management and Administration
157 Accounting
158 Secretarial Studies and Office Administration

84007 Gustavus Adolphus College

145 Business Management and Administration
157 Accounting

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

158 Secretarial Studies and Office Administration
211 Computer and Information Science
234 Early Childhood and Elementary Education
235 Health and Physical Education
236 Secondary Education
237 Special Education
251 Engineering
311 Art
314 Music
316 Dramatic Arts
353 Nursing
367 Rehabilitation Services
383 Medical Laboratory Technologies
441 English and Literature
443 Speech
445 Foreign Languages
448 Liberal Studies
481 Mathematics
521 General Physical Science
524 Chemistry
526 Geology
529 Physics
531 Life Sciences
541 Psychology
567 Criminal Justice
581 General Social Science
583 Economics
584 Geography
585 History
586 Political Science
587 Sociology
588 Area and Ethnic Studies
591 Philosophy
595 Theology
*631 Apprenticeship Programs
637 Alternative Education

84008 Hamline University

118 Forestry and Natural Resources
145 Business Management and Administration
234 Early Childhood and Elementary Education
235 Health and Physical Education
236 Secondary Education
251 Engineering
311 Art
314 Music
316 Dramatic Arts
421 Law
441 English and Literature
445 Foreign Languages
448 Liberal Studies
481 Mathematics
524 Chemistry
529 Physics
531 Life Sciences
541 Psychology
562 Public Administration
582 Anthropology
583 Economics
585 History
586 Political Science
587 Sociology
588 Area and Ethnic Studies
591 Philosophy
595 Theology
611 Military Studies
*631 Apprenticeship Programs
637 Alternative Education

84010 Macalester College

118 Forestry and Natural Resources
211 Computer and Information Science
234 Early Childhood and Elementary Education
236 Secondary Education
251 Engineering
311 Art
314 Music
316 Dramatic Arts
441 English and Literature
443 Speech
445 Foreign Languages
448 Liberal Studies
481 Mathematics
524 Chemistry
526 Geology
529 Physics
531 Life Sciences
541 Psychology
582 Anthropology
584 Geography
585 History
586 Political Science
587 Sociology
588 Area and Ethnic Studies
591 Philosophy
595 Theology
637 Alternative Education

84011 Minneapolis College of Art and Design

131 Architecture and Environmental Design
311 Art
317 Photographic Art
318 Printing and Graphics
395 Textiles and Clothing
448 Liberal Studies
*637 Alternative Education

84012 Minnesota Bible College

*353 Nursing
*595 Theology
631 Apprenticeship Programs

84013 North Central Bible College

314 Music
*448 Liberal Studies
595 Theology

84014 Northwestern College

*158 Secretarial Studies and Office Administration
*193 Journalism and Communications
234 Early Childhood and Elementary Education

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

235 Health and Physical Education
 *311 Art
 314 Music
 *318 Printing and Graphics
 *448 Liberal Studies
 581 General Social Science
 *592 Religion
 *595 Theology
 637 Alternative Education

84015 Pillsbury Baptist Bible College

*158 Secretarial Studies and Office Administration
 234 Early Childhood and Elementary Education
 235 Health and Physical Education
 236 Secondary Education
 314 Music
 441 English and Literature
 443 Speech
 481 Mathematics
 521 General Physical Science
 585 History
 *595 Theology

84016 College of Saint Benedict

145 Business Management and Administration
 157 Accounting
 211 Computer and Information Science
 234 Early Childhood and Elementary Education
 236 Secondary Education
 251 Engineering
 311 Art
 *314 Music
 316 Dramatic Arts
 353 Nursing
 367 Rehabilitation Services
 383 Medical Laboratory Technologies
 391 Home Economics
 393 Dietetics
 *441 English and Literature
 445 Foreign Languages
 *448 Liberal Studies
 481 Mathematics
 524 Chemistry
 526 Geology
 529 Physics
 531 Life Sciences
 541 Psychology
 565 Social Service
 581 General Social Science
 583 Economics
 585 History
 586 Political Science
 587 Sociology
 591 Philosophy
 595 Theology
 611 Military Studies
 *631 Apprenticeship Programs
 *637 Alternative Education

84017 College of Saint Catherine

114 Food Science and Technology
 145 Business Management and Administration
 193 Journalism and Communications
 211 Computer and Information Science
 234 Early Childhood and Elementary Education
 235 Health and Physical Education
 236 Secondary Education
 311 Art
 314 Music
 353 Nursing
 367 Rehabilitation Services
 391 Home Economics
 393 Dietetics
 395 Textiles and Clothing
 441 English and Literature
 443 Speech
 445 Foreign Languages
 448 Liberal Studies
 461 Library Science
 481 Mathematics
 524 Chemistry
 526 Geology
 529 Physics
 531 Life Sciences
 541 Psychology
 562 Public Administration
 564 Recreation
 565 Social Service
 581 General Social Science
 583 Economics
 585 History
 586 Political Science
 587 Sociology
 588 Area and Ethnic Studies
 591 Philosophy
 595 Theology
 611 Military Studies
 *637 Alternative Education

84018 Saint John's University

145 Business Management and Administration
 157 Accounting
 211 Computer and Information Science
 234 Early Childhood and Elementary Education
 236 Secondary Education
 251 Engineering
 311 Art
 314 Music
 316 Dramatic Arts
 353 Nursing
 367 Rehabilitation Services
 383 Medical Laboratory Technologies
 391 Home Economics
 393 Dietetics
 399 Life Sciences
 441 English and Literature
 445 Foreign Languages
 448 Liberal Studies
 481 Mathematics
 524 Chemistry
 526 Geology
 529 Physics
 531 Life Sciences

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

541 Psychology
565 Social Service
581 General Social Science
583 Economics
585 History
586 Political Science
587 Sociology
591 Philosophy
595 Theology
611 Military Studies
*631 Apprenticeship Programs
637 Alternative Education

84019 Saint Mary's College

145 Business Management and Administration
146 Marketing and Sales
157 Accounting
162 Health Care Administration
193 Journalism and Communications
211 Computer and Information Science
231 Education Administration
236 Secondary Education
237 Special Education
238 Counseling
253 Engineering Technologies
311 Art
314 Music
316 Dramatic Arts
353 Nursing
383 Medical Laboratory Technologies
385 Radiological Technology
441 English and Literature
445 Foreign Languages
448 Liberal Studies
481 Mathematics
521 General Physical Science
524 Chemistry
529 Physics
531 Life Sciences
541 Psychology
565 Social Service
567 Criminal Justice
581 General Social Science
583 Economics
585 History
586 Political Science
587 Sociology
591 Philosophy
595 Theology
*631 Apprenticeship Programs
637 Alternative Education

84020 Saint Olaf College

211 Computer and Information Science
235 Health and Physical Education
236 Secondary Education
251 Engineering
311 Art
314 Music
315 Dance
316 Dramatic Arts

353 Nursing
387 Other Health Technologies
391 Home Economics
441 English and Literature
443 Speech
445 Foreign Languages
448 Liberal Studies
481 Mathematics
524 Chemistry
529 Physics
531 Life Sciences
541 Psychology
565 Social Service
581 General Social Science
583 Economics
585 History
586 Political Science
587 Sociology
588 Area and Ethnic Studies
591 Philosophy
595 Theology
*637 Alternative Education

84021 Saint Paul Bible College

193 Journalism and Communications
234 Early Childhood and Elementary Education
314 Music
*448 Liberal Studies
585 History
*595 Theology

84022 College of Saint Scholastica

145 Business Management and Administration
163 Medical Records Administration
193 Journalism and Communications
234 Early Childhood and Elementary Education
236 Secondary Education
251 Engineering
314 Music
353 Nursing
367 Rehabilitation Services
383 Medical Laboratory Technologies
391 Home Economics
393 Dietetics
441 English and Literature
481 Mathematics
521 General Physical Sciences
524 Chemistry
531 Life Sciences
541 Psychology
565 Social Service
581 General Social Science
585 History
587 Sociology
588 Area and Ethnic Studies
595 Theology
611 Military Studies
*637 Alternative Education

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

84023 College of Saint Teresa

145 Business Management and Administration
 157 Accounting
 193 Journalism and Communications
 196 Communication Technologies
 211 Computer and Information Science
 234 Early Childhood and Elementary Education
 236 Secondary Education
 237 Special Education
 251 Engineering
 311 Art
 314 Music
 315 Dance
 353 Nursing
 367 Rehabilitation Services
 383 Medical Laboratory Technologies
 441 English and Literature
 445 Foreign Languages
 448 Liberal Studies
 481 Mathematics
 531 Life Sciences
 541 Psychology
 565 Social Service
 567 Criminal Justice
 581 General Social Science
 585 History
 586 Political Science
 587 Sociology
 595 Theology
 *637 Alternative Education

586 Political Science
 587 Sociology
 588 Area and Ethnic Studies
 591 Philosophy
 595 Theology
 611 Military Studies
 *631 Apprenticeship Programs
 *637 Alternative Education

84026 School of the Associated Arts

311 Art
 318 Printing and Graphics

85002 Luther Northwestern Theological Seminary

595 Theology
 *637 Alternative Education

85004 Saint Paul Seminary

*595 Theology

85005 United Theological Seminary of the Twin Cities

595 Theology
 *631 Apprenticeship Programs
 637 Alternative Education

85006 William Mitchell College of Law

421 Law
 637 Alternative Education

85008 Bethany Lutheran Theological Seminary

595 Theology
 637 Alternative Education

85010 Northwestern College of Chiropractic

373 Chiropractic
 637 Alternative Education

85012 Mayo Medical School

363 Medicine

84024 College of Saint Thomas

145 Business Management and Administration
 193 Journalism and Communications
 211 Computer and Information Science
 231 Education Administration
 234 Early Childhood and Elementary Education
 235 Health and Physical Education
 236 Secondary Education
 237 Special Education
 238 Counseling
 311 Art
 314 Music
 316 Dramatic Arts
 391 Home Economics
 393 Dietetics
 395 Clothing and Textiles
 441 English and Literature
 443 Speech
 445 Foreign Languages
 448 Liberal Studies
 481 Mathematics
 524 Chemistry
 526 Geology
 529 Physics
 531 Life Sciences
 541 Psychology
 562 Public Administration
 565 Social Service
 581 General Social Science
 583 Economics
 585 History

*These are the schools which offer short-term training programs and are described in this volume. The remaining programs are long-term programs and are described in the MCIS volume titled, "Programs of Study & Training in Minnesota."

85013 Mayo School of Health Related Sciences

353 Nursing
367 Rehabilitation Services
*383 Medical Laboratory Technologies
*385 Radiologic Technology
*387 Other Health Technologies
*631 Apprenticeship Programs

90005 Saint Mary's Hospital School of Radiologic Technology, Duluth

*385 Radiological Technology

90013 Saint Cloud Hospital School of Nursing

353 Nursing

90014 Rice Memorial Hospital - School of Radiological Technology

*385 Radiological Technology

90031 Abbott-Northwestern Hospital - School of Radiologic Technology

*385 Radiological Technology

90034 Methodist Hospital - School of Radiologic Technology

*385 Radiological Technology

90035 Veterans Administration Hospital School of Radiologic Technology

*385 Radiological Technology

90044 North Memorial Medical Center - School of X-Ray Technique

*385 Radiological Technology

90095 V.A. Hospital School of Anesthesia

353 Nursing

90097 Fairview Deaconess Hospital School of Nursing

353 Nursing

90098 Abbott-Northwestern Hospital School of Anesthesia

353 Nursing

90099 Saint Cloud Hospital School of X-Ray Technology

*385 Radiological Technology

FINANCIAL AID

All colleges and universities and many vocational schools provide financial aid to students who need help in paying for their schooling. When you apply for financial aid, the school will determine an amount you and your family should provide. If there is a difference between what you and your family are expected to pay and what it costs, the school will attempt to make up the difference with financial aid.

The next few pages contain the following information on financial aid:

Explanations of financial aid programs and how they work

Steps in getting financial aid

Common questions about financial aid

Financial aid references

Financial aid is money to help meet college costs. The money for financial aid comes from the federal and state governments, banks, the colleges themselves, and private donors. You must apply for financial aid to get it. (You apply for aid separately from admission to the school.) The amount and kind of aid you get is based on your financial need, and on the kinds of aid available at the school you attend.

Most students who receive aid get a combination of grants, loans and/or work put together in a financial aid 'package'. The package is put together by a financial aid office at the school or college from information you provide. A standard application form, called the 'Family Financial Statement (FFS)', is available from most high school counseling offices and college financial aid offices.

There are several kinds of financial aid:

- Grants, also called Scholarships: do not require repayment;
- Loans: typically repaid after you leave school at much lower interest rates than regular bank loans;
- Work Study: money to create jobs for students. Jobs are usually on campus and sometimes related to career goals or fields of study;
- Private Aid Programs: aid offered by private organizations;
- Special Aid Programs: aid for special groups of students.

*****GRANTS**

Pell Grants (Formerly Called BEOG)

Pell Grants are awarded directly by the federal government. Only undergraduate students enrolled at least half-time may receive Pell Grants. If you want to apply for a Pell Grant and other kinds of financial aid, fill out a (FFS). If you want to apply only for a Pell Grant, fill out a Pell Grant application. Pell Grants range from \$213 to \$1,800, depending on your need and the costs of the school you attend.

Supplemental Educational Opportunity Grants (SEOG)

These grants are awarded by schools and colleges using money provided by the federal government. Only undergraduate students enrolled at least half-time may receive SEOG grants. Apply for a SEOG by filling out a FFS and listing the schools you might attend. SEOG amounts range from \$200 to \$2,000, depending on your need and on available money at the school. Apply as soon as possible after January 1, 1984, for the 1984-85 school year.

'Need Grants' and 'Cash Awards'

Need Grants and Cash Awards are made by the Minnesota Higher Education Coordinating Board. To be eligible, you must be a full-time undergraduate student at a participating college or university in Minnesota. Apply for a Need Grant or Cash Award by filling out a FFS. Your school or college will let you know if you are going to receive a Need Grant or Cash Award. Need Grants and scholarships range from \$100 to \$3,174 and are based on financial need.

Institutional Grants

Many colleges provide grants from their own resources (or from money given to the school by private donors). Apply for these programs to the director of financial aid at the institution you want to attend.

*****LOANS**

National Direct Student Loans (NDSL)

These loans are made by schools and colleges, using money provided by the federal government. Loan amounts are based on financial need, and on available money at the school you attend. Apply for an NDSL loan by filling out a Family Financial Statement (FFS) and listing the school you plan to attend. Apply as soon as possible after January 1, 1984, for the 1984-85 school year. No interest is charged while you remain a student. Six months after you leave school, you begin paying at an interest rate of five percent per year. You have up to 10 years to repay the loan with payments of at least \$50 per month. Loans can be cancelled or deferred under special circumstances that your school's financial aid office can tell you about.

Guaranteed Student Loans (GSL)

These loans are made by banks, savings and loan associations, credit unions, and other commercial lending institutions. Loans are based on family income. You can get application forms from schools, but you apply directly to the lender. You will have to pay a one percent 'processing fee' before you get the loan. No interest is charged while you remain a student, but a five percent 'origination fee' will be deducted from your loan. Six months after you graduate or withdraw, you begin paying at an interest rate of eight percent per year. You have up to 10 years to repay the loan with payments of at least \$50 per month. For more information, contact your school's financial aid office.

Institutional Loans

Many colleges provide loans from their own resources (or from money given to the school by private donors). Apply for these programs to the director of financial aid at the institution you want to attend.

*****WORK PROGRAMS**

Non-profit employers can get money from the federal government to help create 'college work-study' jobs. These jobs are open only to students who have financial need. To apply for work-study, fill out a Family Financial Statement (FFS) and list the school you plan to attend. Other work programs are provided by the school or college. Some jobs are intended to supplement an educational program (a biology major might have a job as a lab assistant; a secretarial science major might get a job in an office); others simply provide income to finance your education.

*****PRIVATE AID PROGRAMS**

National Merit Scholarship is a large, private student aid program. Grants are made by national merit to students with outstanding academic ability as demonstrated on the PSAT/NMSQT examination taken during the junior year of high school. National Merit Grants come from a number of different private sources.

Many local organizational scholarships such as parent-teacher associations, labor unions, fraternal orders like the Masons or Elks, and local business firms provide financial aid. The best source of information about these private programs is a high school guidance counselor or the director of financial aid at the school or college you will be attending. If you are awarded a privately funded scholarship, the college or school you attend may adjust the other kinds of aid in your financial aid 'package'.

*****SPECIAL AID PROGRAMS**

There are some programs available to special groups of students. Veterans and children of deceased veterans can get aid from the Veterans' Administration. The Bureau of Indian Affairs provides grants to registered members of Native American tribes. Special federal aid programs are available to students seeking careers in the health or law enforcement programs.

For information see:

- A guidance counselor at your local high school,
- The director of financial aid at your school or college, or
- Books about financial aid.

STEPS IN GETTING FINANCIAL AID

The Fall Before You Will Enter School:

1. Select schools that will fulfill your educational and career goals. To learn about schools offering various programs of study and training. See the MCIS reference volume on Programs of Study and Training in Minnesota.
2. Write to the admission office at each school in which you are interested. Ask about financial aid possibilities and tests required for entry. (You must make two applications: one for admission to the school, another for financial aid.)
3. Obtain a Family Financial Statement (FFS). They are available from a high school counselor or a college financial aid office. Or, you can call the Minnesota Higher Education Coordinating Board, Suite 400, Capitol Square Building, 550 Cedar Street, St. Paul, Minnesota 55101. Toll free out-state phone 1-800-652-9747 or in the metropolitan area 296-5715.
4. Estimate your costs of attending each of the schools you have chosen. Estimate basic expenses using the college catalog and information from the MCIS school file, TYPE: SCH.
5. Begin compiling the family financial information needed to fill out the Family Financial Statement (FFS): income tax information for 1983, figures on non-taxable income, and information on assets. The financial information required on the FFS is similar to the information needed when applying for a loan.

Soon After January 1:

6. Send the financial aid form to the college scholarship service, or directly to the school if they request it. Do this as soon after January 1 as possible. Apply early and you will have a much better chance of receiving financial aid. (Your FFS will not be accepted before January 1, however, so do not send it before this date. Be sure to sign and date the FFS January 1 or later.)

In The Spring:

7. The schools will each tell you whether they will give you financial aid. They will also explain how much grant, loan, or work-study money they can offer you.
8. Notify the schools whether you accept their financial aid packages.

Beginning With The Summer Term:

9. You can spend your financial aid for school expenses any term of that academic year: summer, fall, winter, or spring.

Each Fall, If You Are Planning To Be In School The Next Year:

10. Apply for financial aid again. You have to apply each year.

COMMON QUESTIONS ABOUT FINANCIAL AID

- Q. I don't have much money. Should I choose only colleges with low tuition costs?
- A. No. Choose schools that will best meet your career and educational goals. Schools with high tuition often give the most financial aid.
- Q. What does 'financial need' mean?
- A. 'Need' is the difference between what it costs to attend a particular college, and the amount you and your family can afford to pay toward those costs. Colleges may cover part or all of your need with financial aid.
- Q. When should I apply for financial aid?
- A. You need to start about a year before you plan to enter school. Send in the Family Financial Statement (FFS) as soon after January 1 as possible. (The FFS will not be accepted before January 1. Be sure to sign and date the FFS January 1 or later.)
- Q. What if I don't have information from my 1983 federal tax return by January 1? Should I wait?
- A. No. If you have not yet completed the 1983 federal tax return, you may estimate your tax information in order to send in the FFS early. However, you may be asked to prove your estimates later.
- Q. How can I tell if I am a 'dependent' or an 'independent' student?
- A. In past years, students were asked to answer three questions:
- Did or will you live with your parents for more than six weeks during the past or present calendar year? YES NO
 - Did or will your parents claim you as an exemption on their U.S. income tax return for the past or present year? YES NO
 - Did or will you get more than \$750 worth of support from your parents during the past or present year? YES NO
- Q. Is my financial information confidential?
- A. Yes. The information you or your family put on the Family Financial Statement (FFS) is strictly confidential. It is used only to establish eligibility for financial aid.
- Q. Who decides whether I will get financial aid?
- A. Actually, each school decides. For federal financial aid, they use a formula developed by the U.S. Department of Education and approved every year by congress. This formula applies to all applicants and uses the information you put on your financial aid form. Costs and amounts of aid money are different at each school. So each one may offer you a different aid package.

Q. What does it cost to apply for financial aid?

A. American College Testing (ACT) charges for processing your FAF and sending it to the colleges you list. The minimum fee is currently \$6.00 and \$3.00 for each additional copy.

Q. What happens after I send in the FFS.

A. 1. The ACT will send you a Student Financial Aid Report in about four weeks. It will tell you that they have processed your FFS and have sent copies to the financial aid offices of the schools you listed.

2. The Federal Pell Grant Office will send you a student aid report which will have an index number on it. This number is not a dollar amount, but tells how your need compares with other people's. The lower the number, the more likely you are to receive aid. When you receive the student aid report, you should take it (or send a copy) to the financial aid offices at the schools.

3. The financial aid offices at the schools you listed will contact you after studying your FFS from the college scholarship services. They will tell you if you are eligible for financial aid and the exact amounts and types of aid they can give you. Most students who receive an award get a combination of grants, loans, and/or work-study put together in a financial aid 'package'. (This includes aid from federal and state sources.)

QUESTIONS TO ASK THE FINANCIAL AID COUNSELOR AT THE SCHOOLS YOU CHOOSE

Q. Do I need to be admitted to the school before I may apply for financial aid?

Q. What private grants and scholarships may I apply for at this school?

Q. If my financial situation has changed a great deal from last year, ask how I can show that when I apply?

Q. What is the deadline for applying for financial aid?

Q. What if my family can't pay the estimated family contribution?

Q. When will the school let me know if I am to receive financial aid?

Q. Whom should I contact if I have questions later?

FINANCIAL AID REFERENCES

*** FREE OR INEXPENSIVE PUBLICATIONS ***

"Applying for Financial Aid" (Printed Annually) Explains how the American College Testing Program determines a family's contribution to college costs. Act Publications, P.O. Box 168, Iowa City, IA 52243. Free. 319/337-1410

"Don't Miss Out: The Ambitious Student's Guide to Scholarships and Loans." A complete guide to available financial aid. Octameron Associates, P.O. Box 3437, Alexandria, VA 22302. \$2.75. 703/836-1019

"Five Federal Programs." An explanation of the major federal aid programs. Department of Education, Office of Student Financial Association, 400 Maryland Ave. S.W., Washington, D.C. 20202. Free. 202/472-5080

"Meeting College Costs." A booklet to help you learn whether you are eligible for student financial aid. College Board Publications Orders, Dept. A33, Box 886 New York, New York 10101. Order Item #236251 \$6.50 per 50. (Enclose a lettersized envelope, self-addressed and stamped.) 312/866-1700

"Need a Lift?" Description of programs for veterans and military dependents. American Legion Education and Scholarship program, P.O. Box 1055, Indianapolis, IN 46206. \$1.00 Prepaid. 317/635-8411

"Scholarships and Loans for Beginning Education in Nursing." National League for Nursing, 10 Columbus Circle, New York, New York 10019. Order #41-410, \$2.50 plus .75 postage and handling, prepaid. 212/582-1022

"Higher Educational Opportunities for Minorities and Women...Annotated Selections" 1982; Stock #065-000-00175-6. Linda Byrd Johnson and Carol J. Smith, U.S. Government Printing Office, Washington, D.C. 20402. \$5.00. 725-2134

"Student's Guide to Scholarships and Loans." National Association of Secondary School Principals, Attn: Office of Student Activities, 1904 Association Dr., Reston, VA 22091. \$3.00 plus \$2.00 postage and handling. 703/860-0200

***** Higher Priced Publications *****
(May Be Found In Libraries or Bookstores)

"Chronicle Student Aid Annual." Chronicle Guidance Publications,
Moravia, NY 13118. \$14.50 plus \$1.45 postage and handling. Prepaid.
315/497-0330

"The College Cost Book." College Board Publications Orders, Dept. A33,
Box 886 New York, New York 10101. Order #001605 \$9.95.
312/866-1700

"Dollars for Scholars Student Aid Catalog, Minnesota Edition." Marlys C.
Johnson and Linda J. Thompson. Peterson's Guides, P.O. Box 2123,
Princeton, NJ 08540. \$7.95. One copy has been send to each high
school in Minnesota.

"Financial Aids for Higher Education," William C. Brown Company, 2460
Kerper Blvd., Dubuque, IA 52001. \$28.95. 319/588-1451

"Your Own Financial Aid Factory." Peterson's Guides, P.O. Box 2123,
Princeton, NJ 08540. \$6.95. 609/924-5338

111 AGRICULTURAL PRODUCTION AND SERVICES

Agricultural production programs prepare people with knowledge and skills to effectively and economically use resources such as land, water, chemicals, machinery, and labor in the production of plant and animal products. This training provides a good background for farm and ranch operation and for other occupations in agricultural research, teaching and extension services with state, federal, and private agencies. Programs in agricultural services and supplies prepare people to sell supplies related to agricultural production such as seed, grain, farm chemicals, and farm machinery. Programs in agricultural mechanics prepare people to operate, maintain and repair a variety of equipment used in agricultural production.

Many four-year colleges and universities offer bachelor degree programs and some also offer master and doctoral degree programs in agriculture related areas. Many community colleges offer two-year programs that can be transferred to a four-year college or university program in agriculture.

---PROGRAM ADMISSION: A high school diploma or its equivalent is normally required for admission to these programs.

---TYPICAL COURSE WORK: Course work varies greatly, according to the agricultural specialty being studied. Most agriculture students, however, take courses in organic and inorganic chemistry, biology, and in other physical sciences. Students are also usually required to take background courses in subjects such as English composition and mathematics. Most agricultural programs include classes in most or all of the following subjects:

Range Management	Irrigation Methods
Agricultural Marketing	Farm Buildings
Poultry and Animal Science	Soil Dynamics
Agricultural Business Management	Agricultural Processing

Instruction is by lecture and class discussion, supported by study, research, and the writing of reports. Depending on specialty, agricultural students may spend considerable time in the laboratory or in the field.

---GRADUATION REQUIREMENTS: Requirements vary. See college catalogs for detailed information.

---THINGS TO KNOW: Fewer than ten percent of the agricultural graduates enter production agriculture; most work in non-farm jobs that are closely related to agriculture.

---RELATED PROGRAMS: PROG 116 Agricultural Business and Management, 112 Animal Sciences, 113 Soil and Plant Sciences, 114 Food Science and Technology, 115 Horticulture and Landscaping, 271 Vehicle and Equipment Operation (for agricultural equipment programs), 236 Secondary Education (for agricultural education programs), 531 Life Sciences, 121 Fisheries and Wildlife Sciences, 118 Forestry and Natural Resources, 119 Forest Products.

---DIRECTLY RELATED OCCUPATIONS: DESC 4162 Farmers, 2627 Agronomists, 4166 General Farm Hands, 2462 Animal Scientists.

ASSOCIATED OCCUPATIONS: DESC 7427 Farm Equipment Salespeople, 4161 Farm Managers.

CIPS: 01.02	01.0599
01.03	01.07
01.0501	01.99
01.0502	02.01
01.0503	

SCHOOLS:

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AGRICULTURAL EQUIPMENT MECHANICS' PROGRAM PREPARES AN INDIVIDUAL TO SELECT, OPERATE, SERVICE, MAINTAIN, AND REPAIR A VARIETY OF AGRICULTURAL POWER UNITS AND AGRICULTURAL EQUIPMENT. PROGRAM COMPONENTS INCLUDE GAS, DIESEL AND ELECTRICAL UNITS, WELDING, REFRIGERATION, AND HYDRAULIC SYSTEMS.

THE 'FARM OPERATION AND MANAGEMENT' PROGRAM INVOLVES LEARNING EXPERIENCES CONCERNED WITH PRINCIPLES AND PROCESSES INVOLVED IN THE ECONOMIC UTILIZATION OF LAND, LABOR AND CAPITAL TO MEET A MANAGEMENT GOAL. PROGRAM COMPONENTS INCLUDE: CROP AND LIVESTOCK PRODUCTION; POWER AND EQUIPMENT MAINTENANCE; BUILDINGS AND CONVENIENCES; SOIL AND WATER MANAGEMENT; MARKETING AND FINANCE; RECORD KEEPING AND ENTREPRENEURSHIP.

--- DEGREES OFFERED: DIPLOMAS ARE OFFERED IN THESE PROGRAMS.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE EACH 20 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR THE AGRICULTURAL EQUIPMENT MECHANICS PROGRAM WILL INCLUDE \$700 FOR BOOKS, SUPPLIES, EQUIPMENT AND OTHER COSTS.

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AGRICULTURE SUPPLIES, SALES, AND SERVICE' PROGRAM PREPARES INDIVIDUALS TO SELL SUPPLIES FOR AGRICULTURAL PRODUCTION; PROVIDE AGRICULTURAL SERVICES; AND PURCHASE, GRADE, STORE, MARKET, AND TRANSPORT AGRICULTURAL PRODUCTS. COMMODITIES INCLUDED IN THE EDUCATIONAL PROCESS INCLUDE: FEED, SEEDS, FERTILIZERS, AGRICULTURAL CHEMICALS, EQUIPMENT, GRAIN, LIVESTOCK, AND LIVESTOCK PRODUCTS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 20 1/2 MONTHS IN LENGTH.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$320 FOR BOOKS AND SUPPLIES AND A \$10 LAB DEPOSIT.

- - - - - 25004 AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FARM OPERATION AND MANAGEMENT' PROGRAM INVOLVES LEARNING EXPERIENCES CONCERNED WITH PRINCIPLES AND PROCESSES INVOLVED IN THE ECONOMIC UTILIZATION OF LAND, LABOR AND CAPITAL TO MEET A MANAGEMENT GOAL. PROGRAM COMPONENTS INCLUDE: CROP AND LIVESTOCK PRODUCTION; POWER AND EQUIPMENT MAINTENANCE; BUILDINGS AND CONVENIENCES; SOIL AND WATER MANAGEMENT; MARKETING AND FINANCE; RECORD KEEPING AND ENTREPRENEURSHIP.

THE 'AGRICULTURAL EQUIPMENT MECHANICS' PROGRAM PREPARES AN INDIVIDUAL TO SELECT, OPERATE, SERVICE, MAINTAIN, AND REPAIR A VARIETY OF AGRICULTURAL POWER UNITS AND AGRICULTURAL EQUIPMENT. PROGRAM COMPONENTS INCLUDE GAS, DIESEL AND ELECTRICAL UNITS, WELDING, REFRIGERATION, AND HYDRAULIC SYSTEMS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY AND TRADE CERTIFICATE ARE OFFERED.

--- PROGRAM LENGTH: THE FARM OPERATION AND MANAGEMENT IS A 20 MONTH PROGRAM. THE AGRICULTURAL EQUIPMENT MECHANICS IS AN 18 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR TOOLS, BOOKS, SUPPLIES AND

MISCELLANEOUS COSTS WILL BE APPROXIMATELY \$675 FOR AGRICULTURAL EQUIPMENT.

- - - - - 25007 CANBY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FARM OPERATION AND MANAGEMENT' PROGRAM INVOLVES LEARNING EXPERIENCES CONCERNED WITH PRINCIPLES AND PROCESSES INVOLVED IN THE ECONOMIC UTILIZATION OF LAND, LABOR AND CAPITAL TO MEET A MANAGEMENT GOAL. PROGRAM COMPONENTS INCLUDE: CROP AND LIVESTOCK PRODUCTION; POWER AND EQUIPMENT MAINTENANCE; BUILDINGS AND CONVENIENCES; SOIL AND WATER MANAGEMENT; MARKETING AND FINANCE; RECORD KEEPING AND ENTREPRENEURSHIP.

THE 'AGRICULTURAL EQUIPMENT MECHANICS' PROGRAM PREPARES AN INDIVIDUAL TO SELECT, OPERATE, SERVICE, MAINTAIN, AND REPAIR A VARIETY OF AGRICULTURAL POWER UNITS AND AGRICULTURAL EQUIPMENT. PROGRAM COMPONENTS INCLUDE GAS, DIESEL AND ELECTRICAL UNITS, WELDING, REFRIGERATION, AND HYDRAULIC SYSTEMS.

--- DEGREES OFFERED: A DIPLOMA OF GRADUATION IS OFFERED.

--- LENGTH OF PROGRAM: THE FARM OPERATIONS AND MANAGEMENT PROGRAM IS 22 MONTHS LONG. THE AGRICULTURAL EQUIPMENT MECHANICS PROGRAM IS 11 MONTHS LONG.

- - - - - 25015 HUTCHINSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AGRICULTURAL EQUIPMENT MECHANICS' PROGRAM PREPARES AN INDIVIDUAL TO SELECT, OPERATE, SERVICE, MAINTAIN, AND REPAIR A VARIETY OF AGRICULTURAL POWER UNITS AND AGRICULTURAL EQUIPMENT. PROGRAM COMPONENTS INCLUDE GAS, DIESEL AND ELECTRICAL UNITS, WELDING, REFRIGERATION, AND HYDRAULIC SYSTEMS.

--- DEGREES OFFERED: STUDENTS WHO MEET ALL OF THE CORE REQUIREMENTS (COMPETENCIES) WILL RECEIVE A DEGREE.

--- LENGTH OF PROGRAM: THE AGRICULTURAL EQUIPMENT MECHANICS PROGRAM IS 80-88 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR THE AGRICULTURAL EQUIPMENT MECHANICS PROGRAM WILL INCLUDE \$145 FOR BOOKS, SUPPLIES AND FEES FOR THE FIRST YEAR (TOOLS ARE FURNISHED FOR THE FIRST YEAR) AND \$130 FOR BOOKS, SUPPLIES AND FEES FOR THE SECOND YEAR. AT THE END OF THE FIRST YEAR, STUDENTS MUST BUY A SET OF TOOLS COSTING ABOUT \$800.

- - - - - 25016 JACKSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FARM OPERATION AND MANAGEMENT' PROGRAM INVOLVES LEARNING EXPERIENCES CONCERNED WITH PRINCIPLES AND PROCESSES INVOLVED IN THE ECONOMIC UTILIZATION OF LAND, LABOR AND CAPITAL TO MEET A MANAGEMENT GOAL. PROGRAM COMPONENTS INCLUDE: CROP AND LIVESTOCK PRODUCTION; POWER AND EQUIPMENT MAINTENANCE; BUILDINGS AND CONVENIENCES; SOIL AND WATER MANAGEMENT; MARKETING AND FINANCE; RECORD KEEPING AND ENTREPRENEURSHIP.

--- DEGREES OFFERED: A TECHNICAL SCHOOL DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: FARM OPERATION IS 20 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR BOOKS AND SUPPLIES: \$200 1ST YEAR; \$150 2ND YEAR.

- - - - - 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FARM OPERATION AND MANAGEMENT' PROGRAM INVOLVES LEARNING EXPERIENCES CONCERNED WITH PRINCIPLES AND PROCESSES INVOLVED IN THE ECONOMIC UTILIZATION OF LAND, LABOR AND CAPITAL TO MEET A MANAGEMENT GOAL. PROGRAM COMPONENTS INCLUDE: CROP AND LIVESTOCK PRODUCTION; POWER AND EQUIPMENT MAINTENANCE; BUILDINGS AND CONVENIENCES; SOIL AND WATER MANAGEMENT; MARKETING AND FINANCE; RECORD KEEPING AND

ENTREPRENEURSHIP.

THE 'AGRICULTURAL EQUIPMENT MECHANICS' PROGRAM PREPARES AN INDIVIDUAL TO SELECT, OPERATE, SERVICE, MAINTAIN, AND REPAIR A VARIETY OF AGRICULTURAL POWER UNITS AND AGRICULTURAL EQUIPMENT. PROGRAM COMPONENTS INCLUDE GAS, DIESEL AND ELECTRICAL UNITS, WELDING, REFRIGERATION, AND HYDRAULIC SYSTEMS. THE 'AGRICULTURE SUPPLIES, SALES, AND SERVICE' PROGRAM PREPARES INDIVIDUALS TO SELL SUPPLIES FOR AGRICULTURAL PRODUCTION; PROVIDE AGRICULTURAL SERVICES; AND PURCHASE, GRADE, STORE, MARKET, AND TRANSPORT AGRICULTURAL PRODUCTS. COMMODITIES INCLUDED IN THE EDUCATIONAL PROCESS INCLUDE: FEED, SEEDS, FERTILIZERS, AGRICULTURAL CHEMICALS, EQUIPMENT, GRAIN, LIVESTOCK, AND LIVESTOCK PRODUCTS.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS OFFERED.

--- LENGTH OF PROGRAM: THESE ARE ALL 78 WEEK PROGRAMS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$400 FOR THE FARM OPERATION AND MANAGEMENT AND THE AGRICULTURAL SUPPLIES SALES AND SERVICE PROGRAMS, AND \$790 FOR THE AGRICULTURAL EQUIPMENT MECHANICS PROGRAM.

- - - - - 25019 MOORHEAD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AGRICULTURE SUPPLIES, SALES, AND SERVICE' PROGRAM PREPARES INDIVIDUALS TO SELL SUPPLIES FOR AGRICULTURAL PRODUCTION; PROVIDE AGRICULTURAL SERVICES; AND PURCHASE, GRADE, STORE, MARKET, AND TRANSPORT AGRICULTURAL PRODUCTS. COMMODITIES INCLUDED IN THE EDUCATIONAL PROCESS INCLUDE: FEED, SEEDS, FERTILIZERS, AGRICULTURAL CHEMICALS, EQUIPMENT, GRAIN, LIVESTOCK, AND LIVESTOCK PRODUCTS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED IN AGRICULTURE SUPPLIES, SALES AND SERVICE.

--- LENGTH OF PROGRAM: THE AGRICULTURE SALES AND SERVICE PROGRAM IS 20 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE ABOUT \$125 FOR AGRICULTURE SUPPLIES, SALES AND SERVICE.

- - - - - 25020 PINE TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FARM OPERATION AND MANAGEMENT' PROGRAM INVOLVES LEARNING EXPERIENCES CONCERNED WITH PRINCIPLES AND PROCESSES INVOLVED IN THE ECONOMIC UTILIZATION OF LAND, LABOR AND CAPITAL TO MEET A MANAGEMENT GOAL. PROGRAM COMPONENTS INCLUDE: CROP AND LIVESTOCK PRODUCTION; POWER AND EQUIPMENT MAINTENANCE; BUILDINGS AND CONVENIENCES; SOIL AND WATER MANAGEMENT; MARKETING AND FINANCE; RECORD KEEPING AND ENTREPRENEURSHIP.

'THE AGRICULTURAL SYSTEMS AND AGRICULTURAL STRUCTURES' PROGRAM PREPARES AN INDIVIDUAL TO PLAN, SELECT MATERIALS FOR CONSTRUCTION, UTILIZE AND MAINTAIN AGRICULTURAL STRUCTURES SUCH AS BARNs, SHEDS, FORAGE AND GRAIN STORAGE STRUCTURES, AND WASTE HANDLING STRUCTURES.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED IN FARM OPERATION AND MANAGEMENT. A VOCATIONAL SCHOOL DIPLOMA IS AWARDED IN AGRICULTURAL SYSTEMS.

--- LENGTH OF PROGRAM: FARM OPERATIONS IS 18 MONTHS LONG AND AGRICULTURAL SYSTEMS IS 9 MONTHS LONG.

- - - - - 25021 PIPESTONE AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FARM OPERATION AND MANAGEMENT' PROGRAM INVOLVES LEARNING EXPERIENCES CONCERNED WITH PRINCIPLES AND PROCESSES INVOLVED IN THE ECONOMIC UTILIZATION OF LAND, LABOR AND CAPITAL TO MEET A MANAGEMENT GOAL. PROGRAM COMPONENTS INCLUDE: CROP AND LIVESTOCK PRODUCTION; POWER AND EQUIPMENT MAINTENANCE; BUILDINGS AND CONVENIENCES; SOIL AND WATER

MANAGEMENT; MARKETING AND FINANCE; RECORD KEEPING AND ENTREPRENEURSHIP.

--- DEGREES OFFERED: STUDENTS WHO COMPLETE THIS PROGRAM ARE AWARDED A DEGREE OF OCCUPATIONAL PROFICIENCY.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 12-20 MONTHS IN LENGTH.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$30.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FARM OPERATION AND MANAGEMENT' PROGRAM INVOLVES LEARNING EXPERIENCES CONCERNED WITH PRINCIPLES AND PROCESSES INVOLVED IN THE ECONOMIC UTILIZATION OF LAND, LABOR AND CAPITAL TO MEET A MANAGEMENT GOAL. PROGRAM COMPONENTS INCLUDE: CROP AND LIVESTOCK PRODUCTION; POWER AND EQUIPMENT MAINTENANCE; BUILDINGS AND CONVENIENCES; SOIL AND WATER MANAGEMENT; MARKETING AND FINANCE; RECORD KEEPING AND ENTREPRENEURSHIP.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 20 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS AND SUPPLIES: \$125-1ST YEAR AND \$100-2ND YEAR.

- - - - - 25026 STAPLES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AGRICULTURAL EQUIPMENT MECHANICS' PROGRAM PREPARES AN INDIVIDUAL TO SELECT, OPERATE, SERVICE, MAINTAIN, AND REPAIR A VARIETY OF AGRICULTURAL POWER UNITS AND AGRICULTURAL EQUIPMENT. PROGRAM COMPONENTS INCLUDE GAS, DIESEL AND ELECTRICAL UNITS, WELDING, REFRIGERAION, AND HYDRAULIC SYSTEMS.

--- DEGREES OFFERED: DIPLOMAS OR TRADE CERTIFICATES ARE AWARDED.

--- LENGTH OF PROGRAM: THE AGRICULTURAL EQUIPMENT MECHANICS PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: SOME BOOKS, TOOLS, AND OTHER SUPPLIES ARE PROVIDED BY THE INSTITUTE. TEXT BOOKS ARE PURCHASED BY THE STUDENT. STUDENTS MUST PURCHASE THEIR OWN TOOLS FOR AGRICULTURAL EQUIPMENT MECHANICS (APPROXIMATELY \$400-\$800).

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'AGRICULTURE SUPPLIES, SALES, AND SERVICE' PROGRAM PREPARES INDIVIDUALS TO SELL SUPPLIES FOR AGRICULTURAL PRODUCTION; PROVIDE AGRICULTURAL SERVICES; AND PURCHASE, GRADE, STORE, MARKET, AND TRANSPORT AGRICULTURAL PRODUCTS. COMMODITIES INCLUDED IN THE EDUCATIONAL PROCESS INCLUDE: FEED, SEEDS, FERTILIZERS, AGRICULTURAL CHEMICALS, EQUIPMENT, GRAIN, LIVESTOCK, AND LIVESTOCK PRODUCTS.

--- DEGREES OFFERED: DIPLOMAS OF RECOGNITION ARE OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 9-18 MONTHS LONG.

- - - - - 25028 THIEF RIVER FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FARM OPERATION AND MANAGEMENT' PROGRAM INVOLVES LEARNING EXPERIENCES CONCERNED WITH PRINCIPLES AND PROCESSES INVOLVED IN THE ECONOMIC UTILIZATION OF LAND, LABOR AND CAPITAL TO MEET A MANAGEMENT GOAL. PROGRAM COMPONENTS INCLUDE: CROP AND LIVESTOCK PRODUCTION; POWER AND EQUIPMENT MAINTENANCE; BUILDINGS AND CONVENIENCES; SOIL AND WATER MANAGEMENT; MARKETING AND FINANCE; RECORD KEEPING AND ENTREPRENEURSHIP.

THE 'AGRICULTURAL EQUIPMENT MECHANICS' PROGRAM PREPARES AN INDIVIDUAL TO SELECT, OPERATE, SERVICE, MAINTAIN, AND REPAIR A VARIETY OF AGRICULTURAL POWER UNITS AND AGRICULTURAL EQUIPMENT. PROGRAM COMPONENTS INCLUDE GAS, DIESEL AND ELECTRICAL UNITS, WELDING, REFRIGERATION, AND HYDRAULIC SYSTEMS.

--- DEGREES OFFERED: DEGREES OF OCCUPATIONAL PROFICIENCY ARE AWARDED.
--- LENGTH OF PROGRAM: THE FARM OPERATION AND MANAGEMENT PROGRAM LASTS TWELVE MONTHS; THE AGRICULTURAL EQUIPMENT MECHANICS PROGRAM IS A TEN MONTH PROGRAM.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FARM OPERATION AND MANAGEMENT' PROGRAM INVOLVES LEARNING EXPERIENCES CONCERNED WITH PRINCIPLES AND PROCESSES INVOLVED IN THE ECONOMIC UTILIZATION OF LAND, LABOR AND CAPITAL TO MEET A MANAGEMENT GOAL. PROGRAM COMPONENTS INCLUDE: CROP AND LIVESTOCK PRODUCTION; POWER AND EQUIPMENT MAINTENANCE; BUILDINGS AND CONVENIENCES; SOIL AND WATER MANAGEMENT; MARKETING AND FINANCE; RECORD KEEPING AND ENTREPRENEURSHIP. THE 'AGRICULTURE SUPPLIES, SALES, AND SERVICES' PROGRAM PREPARES INDIVIDUALS TO SELL SUPPLIES FOR AGRICULTURAL PRODUCTION; PROVIDE AGRICULTURAL SERVICES; AND PURCHASE, GRADE, STORE, MARKET, AND TRANSPORT AGRICULTURAL PRODUCTS. COMMODITIES INCLUDED IN THE EDUCATIONAL PROCESS INCLUDE: FEED, SEEDS, FERTILIZERS, AGRICULTURAL CHEMICALS, EQUIPMENT, GRAIN, LIVESTOCK, AND LIVESTOCK PRODUCTS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OR A CERTIFICATE IS AWARDED.

--- LENGTH OF PROGRAM: THE FARM OPERATION AND MANAGEMENT PROGRAM LASTS 21 MONTHS. THE AGRICULTURAL SUPPLIES SALES AND SERVICES PROGRAM IS A NINE MONTH PROGRAM.

--- SPECIAL COSTS: BOOKS (ALL USABLE BOOKS ARE BOUGHT BACK AT 70 PERCENT OF PAID PRICE) AND SUPPLIES FOR FARM OPERATIONS WILL COST ABOUT \$195.

- - - - - 25031 WINONA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FARM OPERATION AND MANAGEMENT' PROGRAM INVOLVES LEARNING EXPERIENCES CONCERNED WITH PRINCIPLES AND PROCESSES INVOLVED IN THE ECONOMIC UTILIZATION OF LAND, LABOR AND CAPITAL TO MEET A MANAGEMENT GOAL. PROGRAM COMPONENTS INCLUDE: CROP AND LIVESTOCK PRODUCTION; POWER AND EQUIPMENT MAINTENANCE; BUILDINGS AND CONVENIENCES; SOIL AND WATER MANAGEMENT; MARKETING AND FINANCE; RECORD KEEPING AND ENTREPRENEURSHIP.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: FARM OPERATION AND MANAGEMENT IS AN 18 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$495 FOR TOOLS, \$60 FOR UNIFORMS, AND \$100 FOR BOOKS AND SUPPLIES.

- - - - - 25032 EAST GRAND FORKS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FARM OPERATION AND MANAGEMENT' PROGRAM INVOLVES LEARNING EXPERIENCES CONCERNED WITH PRINCIPLES AND PROCESSES INVOLVED IN THE ECONOMIC UTILIZATION OF LAND, LABOR AND CAPITAL TO MEET A MANAGEMENT GOAL. PROGRAM COMPONENTS INCLUDE: CROP AND LIVESTOCK PRODUCTION; POWER AND EQUIPMENT MAINTENANCE; BUILDINGS AND CONVENIENCES; SOIL AND WATER MANAGEMENT; MARKETING AND FINANCE; RECORD KEEPING AND ENTREPRENEURSHIP.

THE 'AGRICULTURAL EQUIPMENT MECHANICS' PROGRAM PREPARES AN INDIVIDUAL TO SELECT, OPERATE, SERVICE, MAINTAIN, AND REPAIR A VARIETY OF AGRICULTURAL POWER UNITS AND AGRICULTURAL EQUIPMENT. PROGRAM COMPONENTS INCLUDE GAS, DIESEL AND ELECTRICAL UNITS, WELDING, REFRIGERATION, AND HYDRAULIC SYSTEMS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: THE FARM OPERATION AND MANAGEMENT PROGRAM IS TWO CONSECUTIVE WINTER TERMS (CONSECUTIVE 4.5 MONTH PERIODS IN WINTER). THE

AGRICULTURAL EQUIPMENT MECHANIC PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS AND SUPPLIES.

- - - - - 25033 RED WING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FARM OPERATION AND MANAGEMENT' PROGRAM INVOLVES LEARNING EXPERIENCES CONCERNED WITH PRINCIPLES AND PROCESSES INVOLVED IN THE ECONOMIC UTILIZATION OF LAND, LABOR AND CAPITAL TO MEET A MANAGEMENT GOAL. PROGRAM COMPONENTS INCLUDE: CROP AND LIVESTOCK PRODUCTION; POWER AND EQUIPMENT MAINTENANCE; BUILDINGS AND CONVENIENCES; SOIL AND WATER MANAGEMENT; MARKETING AND FINANCE; RECORD KEEPING AND ENTREPRENEURSHIP.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS AN 18 MONTH PROGRAM.

- - - - - 27139 AUSTIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'AGRICULTURE-MARKETING (AGRI-BUSINESS/PRODUCTION AGRICULTURE)' PROGRAM IS DESIGNED FOR STUDENTS WHO PLAN TO WORK IN AGRIBUSINESS OR BE A FARM OPERATOR. THE PROGRAM INCLUDES BASIC SCIENCE AND BUSINESS COURSES AS WELL AS TECHNICAL AGRICULTURE COURSES SUCH AS LIVESTOCK FEEDING, LIVESTOCK AND MEAT EVALUATION, ANIMAL SCIENCE, SOIL SCIENCE, AND AGRONOMY. MUCH OF THE SECOND YEAR IS SPENT STUDYING MARKETING, ECONOMICS, AND BUSINESS MANAGEMENT. THIS IS A COMBINED JOINT PROGRAM WITH THE AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE. STUDENTS APPLY DIRECTLY TO THE AAVTI.

--- DEGREES OFFERED: GRADUATES RECEIVE AN ASSOCIATE IN APPLIED SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THIS IS A 2-YEAR CURRICULUM.

- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'AGRICULTURE PRODUCTION MANAGEMENT' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR EMPLOYMENT IN PRODUCTION AGRICULTURE AS FARM OPERATORS OR IN A FIELD OF EMPLOYMENT RELATED TO FARM OPERATION. THE PROGRAM COMBINES EXTENSIVE TRAINING IN AGRICULTURE WITH AN UNDERSTANDING AND KNOWLEDGE OF MODERN BUSINESS METHODS. THE 'AGRICULTURE BUSINESS' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR EMPLOYMENT IN ONE OF THE AREAS OF BUSINESS SERVING AGRICULTURE. THOSE WHO COMPLETE THIS PROGRAM MAY FIND CAREER OPPORTUNITIES IN SALES, SERVICE AND MANAGEMENT POSITIONS IN AGRICULTURE RELATED FIRMS AND INDUSTRIES.

--- DEGREES OFFERED: AN ASSOCIATE OF APPLIED SCIENCE DEGREE IS OFFERED IN EACH PROGRAM.

--- LENGTH OF PROGRAM: BOTH PROGRAMS ARE TWO YEARS LONG.

- - - - - 81004 UNIVERSITY OF MINNESOTA - CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: MAJORS ARE OFFERED IN 'AGRICULTURAL PRODUCTION' (WITH OPTIONS IN CROPS, DAIRY, MEAT ANIMALS AND DIVERSIFIED AGRICULTURE) AND IN 'ANIMAL TECHNOLOGY' (WITH OPTIONS IN DAIRY, MEAT ANIMALS, AND LIGHT HORSE MANAGEMENT). THE AG PRODUCTION MAJOR IS FOR STUDENTS INTERESTED IN FARMING AND FARM MANAGEMENT WHILE THE ANIMAL TECHNOLOGY PROGRAM IS FOR THOSE WHO INTEND TO WORK IN THE LIVESTOCK INDUSTRY. THE AGRICULTURAL EDUCATION CURRICULA IS A PREPROFESSIONAL PROGRAM DESIGNED FOR STUDENTS DESIRING TO ENTER VOCATIONAL AGRICULTURE OR AGRICULTURE EXTENSION. STUDENTS COMPLETE TWO YEARS AT UMC AND THEN

TRANSFER TO A BACCALAUREATE DEGREE PROGRAM IN AGRICULTURAL EDUCATION AT THE UNIVERSITY'S ST. PAUL CAMPUS OR ANOTHER COLLEGE OR UNIVERSITY.

--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THESE ARE 2-YEAR PROGRAMS.

- - - - - 81005 UNIVERSITY OF MINNESOTA - WASECA TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'AGRICULTURAL PRODUCTION' PROGRAM CONCENTRATES ON TRAINING STUDENTS TO INCREASE THE QUALITY AND QUANTITY OF FARM PRODUCTION THROUGH THE USE OF MODERN TECHNOLOGIES AND FARM MANAGEMENT. MAJORS ARE OFFERED IN LIVESTOCK, CROP, AND DIVERSIFIED AGRICULTURAL PRODUCTION AND LIGHT HORSE MANAGEMENT. STUDENTS MAY CHOOSE AN AREA OF EMPHASIS WITHIN THEIR MAJOR FIELD. PROGRAMS ARE OFFERED IN 'AGRICULTURAL INDUSTRIES AND SERVICES' AND 'HORTICULTURAL TECHNOLOGY'. THE FIRST PROGRAM PROVIDES TRAINING FOR CAREERS IN ANIMAL, CROP, SOILS, AND MECHANIZED INDUSTRY-RELATED TECHNOLOGY. MAJORS ARE OFFERED IN AGRICULTURAL COMMUNICATIONS, MECHANIZATION TECHNOLOGY (POWER AND MACHINERY OR STRUCTURES AND EQUIPMENT), RESEARCH TECHNOLOGY (ANIMAL OR CROP), INDUSTRY RELATED TECHNOLOGY (ANIMAL OR CROP), AND SOILS AND CHEMICALS TECHNOLOGY. THE HORTICULTURE TECHNOLOGY PROGRAM OFFERS MAJORS IN FLORICULTURE, GREENHOUSE AND GARDEN CENTER TECHNOLOGY OR LANDSCAPE NURSERY TECHNOLOGY. NOTE: NOT NOW ACCEPTING STUDENTS IN RESEARCH TECHNOLOGY (ANIMAL OR CROP) OR IN AGRICULTURAL COMMUNICATIONS. THE 'AGRICULTURAL SALES AND MARKETING' MAJOR IS DESIGNED TO PREPARE STUDENTS FOR WORK IN THE SALES AND MARKETING OF AGRICULTURE RELATED PRODUCTS. THE 'FAMILY MERCHANDISING' MAJOR PREPARES STUDENTS FOR EMPLOYMENT IN THE BUYING AND SELLING OF GOODS AND SERVICES FOR HOME USE. STUDENTS COMPLETE MAJOR COURSES AND AGRICULTURE AND RELATED COURSES.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IN AGRICULTURAL PRODUCTION IS OFFERED.

--- LENGTH OF PROGRAM: THESE ARE 2 YEAR PROGRAMS.

111 AGRICULTURAL PRODUCTION AND SERVICES TRANSFER PROGRAMS:

- - - - - 26070 BEMIDJI STATE UNIVERSITY
- - - - - 26071 MANKATO STATE UNIVERSITY
- - - - - 26072 MOORHEAD STATE UNIVERSITY
- - - - - 26073 ST. CLOUD STATE UNIVERSITY
- - - - - 26074 WINONA STATE UNIVERSITY
- - - - - 27140 BRAINERD COMMUNITY COLLEGE
- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27144 ITASCA COMMUNITY COLLEGE
- - - - - 27145 WILLMAR COMMUNITY COLLEGE
- - - - - 27147 VERMILION COMMUNITY COLLEGE
- - - - - 27148 ROCHESTER COMMUNITY COLLEGE
- - - - - 27149 NORTHLAND COMMUNITY COLLEGE
- - - - - 27150 MESABI COMMUNITY COLLEGE
- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE
- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE
- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE
- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE
- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE
- - - - - 27156 NORMANDALE COMMUNITY COLLEGE
- - - - - 27157 INVER HILLS COMMUNITY COLLEGE
- - - - - 81001 UNIVERSITY OF MINNESOTA - DULUTH
- - - - - 81003 UNIVERSITY OF MINNESOTA - MORRIS
- - - - - 83003 GOLDEN VALLEY LUTHERAN JUNIOR COLLEGE
- - - - - 84013 NORTH CENTRAL BIBLE COLLEGE
- - - - - 84014 NORTHWESTERN COLLEGE
- - - - - 84015 PILLSBURY COLLEGE
- - - - - 84021 ST. PAUL BIBLE COLLEGE

112 ANIMAL SCIENCE

Animal science programs are designed to teach people the theories, principles, and skills that relate to the production and management of animals and animal products. People in animal science programs study and prepare for occupations in a variety of related areas, such as animal breeding and genetics; animal health, physiology, and nutrition; and dairy, livestock, and poultry sciences. In addition to ranch and farm work, animal science majors may find employment in areas such as feedlot operations; meat and milk processing; meat grading with the U.S. Department of Agriculture (USDA); extension services with feed, seed, and chemical and pharmaceutical companies. Others find work in agricultural loan offices.

Some community colleges offer one-year certificate programs and two-year associate degree programs which concentrate on individual areas, such as poultry, or on closely related areas, such as dairy and livestock management. Many four-year colleges and universities offer more general animal science programs at the bachelor's, master's, and doctoral degree levels. These programs also allow considerable specialization. Some programs, for instance, emphasize the business aspect of animal science, others the scientific aspects, and still others, the veterinary aspects.

---PROGRAM ADMISSION: A high school diploma or its equivalent is usually required for admission to undergraduate programs. A bachelor's degree in animal science or a related field is usually required for admission to graduate programs. See college catalogs for more information.

---TYPICAL COURSE WORK: Course work varies with school, length of program, and specialization. Longer programs require general background courses in health, the humanities, and the social sciences. Usually programs also include all or most of the following:

Feeds and Feeding	Animal Nutrition
Reproduction in Domestic Animals	Evaluation of Dairy Cattle
Meats	Dairy Production
Horse Production	Swine Production
Sheep Production	Animal Improvement
Beef Production	

Instruction is by lecture and involves considerable field and laboratory work.

---GRADUATION REQUIREMENTS: Requirements vary. See college catalogs for more information.

---THINGS TO KNOW: The ever increasing worldwide demand for food makes this a growing industry.

---RELATED PROGRAMS: PROG 111 Agricultural Production and Services, 113 Soil and Plant Sciences, 114 Food Science and Technology, 116 Agricultural Business and Management, 224 Animal Grooming and Training, 378 Veterinary Medicine, 379 Allied Veterinary Services.

---DIRECTLY RELATED OCCUPATIONS: DESC 4162 Farmers, 4166 General Farm Hands, 2642 Agricultural Scientists, 4161 Farm Managers.

ASSOCIATED OCCUPATIONS: DESC 8114 Veterinarians

CIPS: 02.02

SCHOOLS:

- - - - - 25015 HUTCHINSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'DAIRY HERD MANAGEMENT' PROGRAM PREPARES AN INDIVIDUAL TO MANAGE A DAIRY ENTERPRISE BY DEVELOPING COMPETENCIES CONCERNING THE SELECTION, BREEDING, PHYSIOLOGY, NUTRITION, HEALTH, HOUSING AND FEEDING OF DAIRY ANIMALS. ALSO, THE PROGRAM PREPARES THE INDIVIDUAL TO MARKET MILK AND BREED STOCK.

--- LENGTH OF PROGRAM: THIS PROGRAM LASTS 42 WEEKS.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'HORSE CARE AND STABLE OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO OPERATE A STABLE BY DEVELOPING COMPETENCIES CONCERNING THE SELECTION, BREEDING, PHYSIOLOGY, NUTRITION, HEALTH, HOUSING AND MARKETING OF PLEASURE AND DRAFT ANIMALS. THE MARKETING OF SERVICES, SUCH AS MAINTENANCE AND TRAINING, ARE COMPONENTS OF THE PROGRAM.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 13 MONTHS LONG.

- - - - - 81004 UNIVERSITY OF MINNESOTA - CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: MAJORS ARE OFFERED IN 'AGRICULTURAL PRODUCTION' (WITH OPTIONS IN CROPS, DAIRY, MEAT ANIMALS AND DIVERSIFIED AGRICULTURE) AND IN 'ANIMAL TECHNOLOGY' (WITH OPTIONS IN DAIRY, MEAT ANIMALS, AND LIGHT HORSE MANAGEMENT). THE AG PRODUCTION MAJOR IS FOR STUDENTS INTERESTED IN FARMING AND FARM MANAGEMENT WHILE THE ANIMAL TECHNOLOGY PROGRAM IS FOR THOSE WHO INTEND TO WORK IN THE LIVESTOCK INDUSTRY.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED WITH MAJORS IN AGRICULTURAL PRODUCTION AND ANIMAL TECHNOLOGY.

--- LENGTH OF PROGRAM: THESE ARE 2-YEAR PROGRAMS.

113 SOIL AND PLANT SCIENCES

Plants draw vital nutrients from the soil. If these nutrients are lacking or used up, plants do not grow well. Programs in soil and plant sciences intend to teach people basic principles of soil chemistry and fertility, plant nutrition, land use, and soil conservation. There are many specialized programs within the broad category of soil and plant sciences. Some of these programs are agronomy, horticultural science, plant breeding and genetics, plant pathology, pest management, soil chemistry, soil conservation, soil microbiology, and soil physics.

Most agricultural programs include courses related to soil and plant sciences, and many one- and two-year agricultural programs at community colleges can be transferred to soil and plant science programs at four-year colleges and universities. Many four-year colleges and universities allow for emphases in soil and plant sciences in their agricultural programs. Some also offer bachelor's, master's, and doctoral degree programs in soil and plant science areas.

---PROGRAM ADMISSION: Requirements vary. A high school diploma or its equivalent is normally required for admission to undergraduate programs. A bachelor's degree in soil and plant sciences, or in a related area, is usually required for admission to graduate programs.

---TYPICAL COURSE WORK: Course work varies with school, length of program, and emphasis or specialization. Longer programs usually require background courses in the humanities and social sciences. Usually programs will also include all or most of the following:

Chemistry	Botany
Soil Management	Soil, Water, and Plant
Soil Nutrients	Growth
Plant Pests and	Soil Testing
Pesticides	Mathematics
Geology	Physics
Microbiology	Cover Crops

Instruction is by lecture and class discussion, supported by extensive research and field and laboratory work. See college catalogs for complete course descriptions.

---GRADUATION REQUIREMENTS: Requirements vary. See college catalogs for more information.

---RELATED PROGRAMS: PROG 111 Agricultural Production and Services, 114 Food Science and Technology, 115 Horticulture and Landscaping, 116 Agricultural Business and Management, 118 Forestry and Natural Resources.

---DIRECTLY RELATED OCCUPATIONS: DESC 4162 Farmers, 2627 Agronomists, 2613 Horticulturists.

ASSOCIATED OCCUPATION: DESC 4166 General Farm Hands, 2622 Soil Conservationists.

CIPS: 02.04
02.05
02.99

SCHOOLS:

- - - - - 25016 JACKSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SOIL AND WATER MANAGEMENT' PROGRAM PREPARES INDIVIDUALS TO IMPLEMENT SOIL AND WATER MANAGEMENT PRACTICES AND INCLUDES INSTRUCTION IN SURVEYING, PLANNING, LAYING OUT AND MAINTAINING IRRIGATION, SOIL CONSERVATION, DRAINAGE AND RUNOFF SYSTEMS.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 11 MONTHS LONG.

- - - - - 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'PLANT AND SOIL TECHNOLOGY' MAJOR OFFERS OPTIONS IN CROP SCIENCE; SOIL AND FERTILIZER; FLORICULTURE, NURSERY, GREENHOUSE MANAGEMENT; LANDSCAPE, TURF, AND GROUNDS; AND SEED CONDITIONING AND TECHNOLOGY. THE PROGRAMS PROVIDE TRAINING FOR ENTRY INTO RELATED CAREERS IN AGRIBUSINESS INDUSTRIES. THE CURRICULUM OFFERS A PROGRAM OF TECHNICAL EDUCATION AS WELL AS GENERAL EDUCATION. A 6-CREDIT INTERNSHIP WORK EXPERIENCE IS REQUIRED.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2-YEAR PROGRAM.

- - - - - 81005 UNIVERSITY OF MINNESOTA-WASECA TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: PROGRAMS ARE OFFERED IN 'AGRICULTURAL INDUSTRIES AND SERVICES' AND 'HORTICULTURAL TECHNOLOGY'. THE FIRST PROGRAM PROVIDES TRAINING FOR CAREERS IN ANIMAL, CROP, SOIL, AND MECHANIZED INDUSTRY-RELATED TECHNOLOGY. MAJORS ARE OFFERED IN AGRICULTURAL COMMUNICATIONS, MECHANIZATION (POWER & MACHINERY OR STRUCTURES AND EQUIPMENT), RESEARCH TECHNOLOGY (ANIMAL OR CROP), INDUSTRY RELATED TECHNOLOGY (ANIMAL OR CROP), AND SOIL AND CHEMICAL TECHNOLOGY. THE HORTICULTURAL TECHNOLOGY PROGRAM OFFERS MAJORS IN FLORICULTURE, GREENHOUSE AND GARDEN CENTER TECHNOLOGY OR LANDSCAPE NURSERY TECHNOLOGY. NOTE: NOT NOW ACCEPTING STUDENTS IN AGRICULTURAL COMMUNICATIONS OR IN RESEARCH TECHNOLOGY (ANIMAL OR CROP).

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED IN EACH OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THESE ARE 2-YEAR PROGRAMS.

Food science and technology is the application of science and engineering to the producing, processing, packaging, storing, distributing, evaluating, and using of food. Programs in food science and technology prepare people for employment in the food industry. Employment possibilities include research and development in industry, government, and colleges and universities; quality control work with government agencies and within private industry; and management positions in food processing plants.

Many four-year colleges and universities offer bachelor's degree programs; some also offer graduate programs in food science technology. Some community colleges offer two-year programs which may be transferred to a four-year college or university. Training schools also offer shorter certificate programs, designed to prepare people for production work in the food processing industry.

---PROGRAM ADMISSION: Requirements vary, depending on the school and the length of program. Community colleges and four-year colleges and universities usually require that applicants have a high school diploma or its equivalent. See school catalogs for more information.

---TYPICAL COURSE WORK: Course work varies according to school and length of program. Four-year programs usually concentrate on the processing of raw material--milk, fruit, vegetables, seafood, meat, and grains--by canning, freezing, dehydrating, and fermenting. Emphasis is on the basic chemical and physical principles involved. Most programs include courses in the following subjects:

Microbiology	Food Processing
Chemistry	Quality Control
Statistics	Food Law

Two-year programs emphasize the practical application of science to various areas within the food processing industry. Examples of course work include:

Food Chemistry	Quality Control Procedures
Seafoods and Meats	Industrial Safety
Canning and Freezing	Food and Water Sanitation

Instruction is by lecture and class discussion, supported by reading and research, and the writing of reports. Students may be required to do extensive laboratory and field work.

---GRADUATION REQUIREMENTS: Requirements vary depending on school and length of program. See school catalogs for more information.

---THINGS TO KNOW: At some schools students have the opportunity to participate in on-the-job work experience.

---RELATED PROGRAMS: PROG 111 Agricultural Production and Services, 112 Animal Sciences, 113 Soil and Plant Sciences.

---DIRECTLY RELATED OCCUPATIONS: DESC 2672 Quality Control Inspectors, 4324 Bakers, 4326 Meat Cutters, 4328 Fishers-Commercial, 4348 Cannery Workers.

ASSOCIATED OCCUPATION: DESC 2627 Agronomists and 2642 Animal Scientists.

CIPS: 01.04
02.03
15.0602

SCHOOLS:

- - - - - 81005 UNIVERSITY OF MINNESOTA-WASECA TECHNICAL COLLEGE
--- OBJECTIVES OF THE PROGRAM: THE 'FOOD PRODUCTS AND INSPECTION' MAJOR PREPARES STUDENTS FOR WORK IN FOOD PROCESSING PLANTS, DAIRY LABORATORIES, TEST KITCHENS AND GOVERNMENT SERVICE. A 'MARKETING AND DISTRIBUTION' MAJOR TRAINS PERSONS IN THE PURCHASE, TRANSPORTATION, AND SALE OF FOOD PRODUCTS. STUDENTS COMPLETE COURSES IN AGRICULTURE, GENERAL EDUCATION, FOOD INSPECTION, NUTRITION, PRODUCT DEVELOPMENT, AND MARKETING AS WELL AS A 12 CREDIT PRE-OCCUPATIONAL PREPARATION UNIT.
--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IN FOOD INDUSTRY AND TECHNOLOGY IS OFFERED.
--- LENGTH OF PROGRAM: THIS IS A TWO YEAR PROGRAM.

114 FOOD SCIENCE AND TECHNOLOGY TRANSFER PROGRAMS:

- - - - - 26071 MANKATO STATE UNIVERSITY
- - - - - 27139 AUSTIN COMMUNITY COLLEGE
- - - - - 27140 BRAINERD COMMUNITY COLLEGE
- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27144 ITASCA COMMUNITY COLLEGE
- - - - - 27145 WILLMAR COMMUNITY COLLEGE

- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE
- - - - - 27147 VERMILION COMMUNITY COLLEGE
- - - - - 27148 ROCHESTER COMMUNITY COLLEGE
- - - - - 27149 NORTHLAND COMMUNITY COLLEGE
- - - - - 27150 MESABI COMMUNITY COLLEGE
- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE
- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE
- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE
- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE
- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE
- - - - - 27156 NORMANDALE COMMUNITY COLLEGE
- - - - - 27157 INVER HILLS COMMUNITY COLLEGE
- - - - - 81003 UNIVERSITY OF MINNESOTA - MORRIS
- - - - - 84013 NORTH CENTRAL BIBLE COLLEGE
- - - - - 84014 NORTHWESTERN COLLEGE
- - - - - 84015 PILLSBURY COLLEGE

115 HORTICULTURE AND LANDSCAPING

Horticulture and landscaping involve the producing, storing, and marketing of fruit, nut, vegetable, and ornamental greenhouse and nursery crops. They also involve the designing, planting, and managing of landscapes. Horticulture and landscaping programs prepare people for careers directly or indirectly related to these areas.

Many four-year colleges and universities offer bachelor's degree programs in horticulture and landscaping. Some also offer graduate programs. Many community colleges offer one- or two-year associate degree programs which are designed to prepare people for jobs in the landscape and nursery industry. Some community colleges offer two-year programs in horticulture and landscaping which can be transferred to a four-year college or university.

---PROGRAM ADMISSION: A high school diploma or its equivalent is normally required for admission to undergraduate programs. A bachelor's degree is usually required for admission to graduate programs.

---TYPICAL COURSE WORK: Course work varies greatly depending on school, length of program, and area of specialization. Four-year programs require that horticulture and landscaping majors take background courses such as general chemistry, general botany, mathematics, and English composition. In addition, horticulture and landscaping programs include all or most of the following courses:

Horticulture Principles	Plant Propagation
Turfgrass Maintenance	Landscape Maintenance
Fruit and Nut Production	Vegetable Production
Greenhouse Crop Production	Nursery Production

Instruction is by lecture and class discussion, supported by reading and research, and report writing. Depending on specialty, students may spend much time in laboratories, greenhouses, or in the field. Some programs allow or require that students gain on-the-job experience through one or more internships.

---GRADUATION REQUIREMENTS: Requirements vary depending on school, length of program, and specialty area. See college catalogs for more information.

---THINGS TO KNOW: Some programs allow horticulture and landscaping students to specialize in the scientific, technological, or business aspects of the program.

---RELATED PROGRAMS: PROG 111 Agricultural Production and Services, 113 Soil and Plant Sciences, 116 Agricultural Business and Management, 221 Floral Design, 118 Forestry and Natural Resources, 131 Architecture and Environmental Design.

---DIRECTLY RELATED OCCUPATION: DESC 4136 Groundskeepers, 2613 Horticulturists, 2384 Landscape Architects.

ASSOCIATED OCCUPATIONS: DESC 2627 Agronomists, 2642 Animal Scientists, 4146 Floral Designers.

CIPS: 01.06

SCHOOLS:

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HORTICULTURE' PROGRAM PREPARES INDIVIDUALS IN THE BASIC SKILLS AND KNOWLEDGE PERTAINING TO GREENHOUSE OPERATIONS, NURSERY OPERATIONS, GARDEN STORE OPERATIONS AND TURF MANAGEMENT. IMPORTANT COMPONENTS OF THIS PROGRAM ARE THE GROWING, PROCESSING, MAINTAINING AND MARKETING OF PLANT MATERIAL.

--- DEGREES OFFERED: A DIPLOMA IN HORTICULTURE IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 20 1/2 MONTHS LONG.

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'LANDSCAPING' PROGRAM PREPARES INDIVIDUALS TO DESIGN, SITE, PLANT AND MAINTAIN TURF, PLANTS, SHRUBS, OR DEVICES FOR THE BEAUTIFICATION OF HOME GROUNDS, COMMERCIAL PROPERTIES AND RECREATIONAL SITES.

--- DEGREES OFFERED: A DIPLOMA OF COMPLETION AND A CERTIFICATE OF ATTENDANCE IN LANDSCAPING ARE OFFERED.

--- LENGTH OF PROGRAM: THE LANDSCAPING PROGRAM IS 19 MONTHS LONG.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'LANDSCAPING' PROGRAM PREPARES INDIVIDUALS TO DESIGN, SITE, PLANT AND MAINTAIN TURF, PLANTS, SHRUBS, OR DEVICES FOR THE BEAUTIFICATION OF HOME GROUNDS, COMMERCIAL PROPERTIES AND RECREATIONAL SITES.

--- LENGTH OF PROGRAM: THE LANDSCAPING PROGRAM IS 22 MONTHS LONG.

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HORTICULTURE' PROGRAM PREPARES INDIVIDUALS IN THE BASIC SKILLS AND KNOWLEDGE PERTAINING TO GREENHOUSE OPERATIONS, NURSERY OPERATIONS, GARDEN STORE OPERATIONS AND TURF MANAGEMENT. IMPORTANT COMPONENTS OF THIS PROGRAM ARE THE GROWING, PROCESSING, MAINTAINING AND MARKETING OF PLANT MATERIAL.

--- DEGREES OFFERED: A CERTIFICATE OR DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE HORTICULTURAL TECHNOLOGY PROGRAM IS 38 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$75 FOR BOOKS.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HORTICULTURE' PROGRAM PREPARES INDIVIDUALS IN THE BASIC SKILLS AND KNOWLEDGE PERTAINING TO GREENHOUSE OPERATIONS, NURSERY OPERATIONS, GARDEN STORE OPERATIONS AND TURF MANAGEMENT. IMPORTANT COMPONENTS OF THIS PROGRAM ARE THE GROWING, PROCESSING, MAINTAINING AND MARKETING OF PLANT MATERIAL.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: HORTICULTURE IS A 12 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$95 FOR TOOLS, SUPPLIES, AND EQUIPMENT.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HORTICULTURE' PROGRAM PREPARES INDIVIDUALS IN THE BASIC SKILLS AND KNOWLEDGE PERTAINING TO GREENHOUSE OPERATIONS, NURSERY OPERATIONS, GARDEN STORE OPERATIONS AND TURF MANAGEMENT. IMPORTANT COMPONENTS OF THIS PROGRAM ARE THE GROWING,

PROCESSING, MAINTAINING AND MARKETING OF PLANT MATERIALS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: HORTICULTURE IS A 11 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE TOOLS, SUPPLIES, AND EQUIPMENT.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'LANDSCAPING' PROGRAM PREPARES INDIVIDUALS TO DESIGN, SITE, PLANT AND MAINTAIN TURF, PLANTS, SHRUBS, OR DEVICES FOR THE BEAUTIFICATION OF HOME GROUNDS, COMMERCIAL PROPERTIES AND RECREATIONAL SITES.

THE 'HORTICULTURE' PROGRAM PREPARES INDIVIDUALS IN THE BASIC SKILLS AND KNOWLEDGE PERTAINING TO GREENHOUSE OPERATIONS, NURSERY OPERATIONS, GARDEN STORE OPERATIONS AND TURF MANAGEMENT. IMPORTANT COMPONENTS OF THIS PROGRAM ARE THE GROWING, PROCESSING, MAINTAINING AND MARKETING OF PLANT MATERIAL.

THE 'COMMERCIAL GREENHOUSE CROP PRODUCTION' PROGRAM PREPARES INDIVIDUALS TO PRODUCE FLOWERS, FOLIAGE AND RELATED PLANT MATTER IN GREENHOUSES FOR ORNAMENTAL PURPOSES, AND TO ARRANGE, PACKAGE AND MARKET THESE MATERIALS.

--- DEGREES OFFERED: DIPLOMAS OF RECOGNITION ARE OFFERED IN THESE PROGRAMS.

--- LENGTH OF PROGRAM: THESE PROGRAMS RANGE FROM 3 to 21 MONTHS IN LENGTH.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE \$150 FOR LANDSCAPING.

- - - - - 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'PLANT AND SOIL TECHNOLOGY' MAJOR OFFERS OPTIONS IN CROP SCIENCE; SOIL AND FERTILIZER; FLORICULTURE, NURSERY, GREENHOUSE MANAGEMENT; LANDSCAPE, TURF, AND GROUNDS; AND SEED CONDITIONING AND TECHNOLOGY. THE PROGRAMS PROVIDE TRAINING FOR ENTRY INTO RELATED CAREERS IN AGRIBUSINESS INDUSTRIES. THE CURRICULUM OFFERS A PROGRAM OF TECHNICAL EDUCATION AS WELL AS GENERAL EDUCATION. A SIX CREDIT, INTERNSHIP, WORK EXPERIENCE IS REQUIRED.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IN PLANT AND SOIL TECHNOLOGY IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2-YEAR PROGRAM.

- - - - - 81005 UNIVERSITY OF MINNESOTA-WASECA TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: PROGRAMS ARE OFFERED IN 'HORTICULTURAL TECHNOLOGY'. THE HORTICULTURAL TECHNOLOGY PROGRAM OFFERS MAJORS IN FLORICULTURE, GREENHOUSE AND GARDEN CENTER TECHNOLOGY OR LANDSCAPE NURSERY TECHNOLOGY.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED IN EACH OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THESE ARE 2-YEAR PROGRAMS.

Programs in agricultural business and management cover business and economic principles which relate to purchasing, selling, producing, and marketing agricultural products and services. Programs prepare people to work as managers or administrators in businesses that produce, process, or distribute agricultural goods. Some programs are also designed to prepare people to provide managerial support services in areas such as agricultural financing, information, research, and transportation. Some four-year colleges and universities offer bachelor, master, and doctoral degree programs in this area. Many community colleges offer two-year associate degree programs that can be transferred to a four-year college or university program in agricultural business.

---PROGRAM ADMISSION: A high school diploma or its equivalent is normally required for admission to undergraduate programs. A bachelor degree in agricultural business and management, or in a related agricultural or business area, is usually required for admission to graduate programs in agricultural business.

---TYPICAL COURSE WORK: Course work varies depending on school, emphasis, and length of program. Most programs include classes in most or all of the following areas:

Agricultural Marketing	Farm Management
Agricultural Finance	Agricultural Business Law
Agricultural Policy	Production Economics
Economic Development	Agricultural Management
Resource Economics	Quantitative Methods

In addition, agricultural business and management majors are usually required to take basic courses in areas such as mathematics and English composition. Instruction is by lecture and class discussion, reading, research, and the writing of reports and essays.

---GRADUATION REQUIREMENTS: Requirements vary. See school catalogs for more information.

---THINGS TO KNOW: A few schools offer part-time programs for working farmers who want courses that supplement farm operations.

---RELATED PROGRAMS: PROG 111 Agricultural Production and Services, 112 Animal Sciences, 113 Soil and Plant Sciences, 114 Food Science and Technology, 115 Horticulture and Landscaping, 145 Business Management and Administration, 583 Economics.

---DIRECTLY RELATED OCCUPATIONS: DESC 4162 Farmers, 7425 Sales Representatives.

ASSOCIATED OCCUPATION: DESC 4161 Farm Managers, 7427 Farm Equipment Salespersons.

CIPS: 01.01

SCHOOLS:

- - - - - 26175 SOUTHWEST STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE ASSOCIATE OF SCIENCE DEGREE IN

'AGRIBUSINESS' CONSISTS OF 50 CREDITS, 36 OF THEM ARE IN THE AGRIBUSINESS/ BUSINESS CORE, EIGHT OF WHICH ARE RESTRICTED ELECTIVES IN THE AGRIBUSINESS AREA AND SIX OF WHICH ARE IN THE TECHNICAL AGRICULTURAL AREA. THE PROGRAM IS DESIGNED TO PROVIDE STUDENTS WITH A BASIC BACKGROUND IN AGRIBUSINESS. THE BACHELOR OF SCIENCE 'AGRIBUSINESS' PROGRAM IS 81-86 CREDITS AND IS DESIGNED FOR THE STUDENT WHO WANTS A CONCENTRATION WITHIN AGRICULTURE BUSINESS MANAGEMENT. THE STUDENT COMPLETES 40 CREDITS IN THE BUSINESS ADMINISTRATION CORE PLUS CREDITS IN AGRIBUSINESS MANAGEMENT AND TECHNICAL AGRICULTURE, INCLUDING COURSE IN COMMODITY FUTURES, COOPERATIVES, AGRICULTURE MARKETING, AND AGRICULTURAL PRICES.

--- DEGREES OFFERED: AN ASSOCIATE OF SCIENCE DEGREE AND A BACHELOR OF SCIENCE DEGREE ARE OFFERED.

- - - - - 81004 UNIVERSITY OF MINNESOTA - CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'AGRICULTURAL BUSINESS' MAJOR OFFERS OPTIONS IN AGRICULTURAL BUSINESS MANAGEMENT, AGRICULTURAL BUSINESS FINANCE, AND FARM AND RANCH BUSINESS MANAGEMENT. THE FIRST TWO OPTIONS ARE DESIGNED TO TRAIN STUDENTS TO ENTER CAREERS SUCH AS AGRICULTURAL SALES, AGRICULTURAL MARKETING, OR AGRICULTURAL CREDIT. THE OTHER OPTION IS FOR STUDENTS WHO WANT TO LEARN ABOUT THE FINANCIAL ASPECTS OF OPERATING A LARGE COMMERCIAL FARM OR RANCH.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED IN EACH PROGRAM.

--- LENGTH OF PROGRAM: THESE ARE 2 YEAR PROGRAMS.

- - - - - 81005 UNIVERSITY OF MINNESOTA - WASECA TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'AGRICULTURAL BUSINESS MANAGE-MENT' MAJOR PREPARES STUDENTS FOR ENTRY AT THE MIDMANAGEMENT LEVEL IN AGRICULTURE RELATED BUSINESSES. STUDENTS MAY INCLUDE THE STUDY OF AGRICULTURAL COOPERATIVES. THE PROGRAM INCLUDES COURSES IN AGRICULTURE, RELATED EDUCATION, MANAGEMENT, ACCOUNTING AND MERCHANDISING.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IN AGRICULTURAL BUSINESS IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

118 FORESTRY AND NATURAL RESOURCES

Programs in forestry and natural resources prepare people for occupations involving the conservation and/or improvement of natural and renewable resources. Resources such as forests, air, water, soil, fish, and wildlife are studied. This area of study includes a wide variety of instructional programs. Programs focus on applying the natural and social sciences to the use of forests and other natural resources. Some programs in this category are: forest engineering, forest management, forest science, and resource recreation management. Specialty options within each of these programs are also available. For information on fisheries and wildlife sciences, see PROG 121.

Most community colleges have one- or two-year programs which can be transferred to four-year colleges and universities offering programs in forestry and natural resources. Many four-year colleges and universities offer bachelor's, master's, and doctoral degree programs in these areas. Five-year programs in forestry are also available.

---PROGRAM ADMISSION: Requirements vary. A high school diploma or its equivalent is normally required for admission to undergraduate programs. A bachelor's degree is required for admission to graduate programs.

---TYPICAL COURSE WORK: Course work varies greatly with school, length of program, and, most of all, with program emphasis and specialization. Longer programs require background courses in social sciences, humanities, and health. Programs in forestry and natural resources will also include some of the following:

Economics	Forest Management
Business	Recreation Management
Mathematics	Land and Range Management

Instruction is by lecture, technical reading, extensive laboratory and field work, and report writing. See college catalogs for individual program requirements.

---GRADUATION REQUIREMENTS: Requirements vary. See college catalogs for more information.

---RELATED PROGRAMS: PROG 119 Forest Products, 121 Fisheries and Wildlife Sciences, 145 Business Management and Administration, 564 Recreation, 131 Architecture and Environmental Design, 584 Geography.

---DIRECTLY RELATED OCCUPATIONS: DESC 4124 Foresters, 4123 Park Rangers.

ASSOCIATED OCCUPATIONS: DESC 4132 Fish and Game Managers, 2622 Soil Conservationists.

---For more information contact:

DEPARTMENT OF NATURAL RESOURCES
3RD Floor Centennial Office Building
658 Cedar Street
St. Paul, MN 55155

CIPS: 03.01
03.02
03.05
03.99

SCHOOLS:

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'NATURAL RESOURCES' PROGRAM PREPARES INDIVIDUALS FOR ACTIVITIES INVOLVING THE CONSERVATION AND/OR IMPROVEMENT OF RESOURCES SUCH AS FOREST, WATER, FISH AND WILDLIFE FOR ECONOMIC AND RECREATIONAL PURPOSES.

--- DEGREES OFFERED: A DIPLOMA OF COMPLETION AND A CERTIFICATE OF ATTENDANCE ARE OFFERED.

--- LENGTH OF PROGRAM: THE NATURAL RESOURCE PROGRAM IS 21 MONTHS LONG.

- - - - - 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'NATIONAL RESOURCES' PROGRAM PREPARES INDIVIDUALS FOR ACTIVITIES INVOLVING THE CONSERVATION AND/OR IMPROVEMENT OF RESOURCES SUCH AS FOREST, WATER, FISH AND WILDLIFE FOR ECONOMIC AND RECREATIONAL PURPOSES.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES UP TO TWO YEARS OF TWO NINE-MONTH PERIODS.

- - - - - 25026 STAPLES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'NATURAL RESOURCES' PROGRAM PREPARES INDIVIDUALS FOR ACTIVITIES INVOLVING THE CONSERVATION AND/OR IMPROVEMENT OF RESOURCES SUCH AS FOREST, WATER, FISH AND WILDLIFE FOR ECONOMIC AND RECREATIONAL PURPOSES.

--- LENGTH OF PROGRAM: THIS IS A TWO YEAR PROGRAM.

- - - - - 26073 ST. CLOUD STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'ENVIRONMENTAL STUDIES' PROGRAM IS AN INTERDISCIPLINARY MINOR PROGRAM. IT IS DESIGNED TO COMPLEMENT A MAJOR PROGRAM IN BIOLOGY, CHEMISTRY, EARTH SCIENCE, BUSINESS, OR OTHER AREAS OF THE STUDENT'S INTEREST. IT PROVIDES INFORMATION ABOUT THE ENVIRONMENT, ENVIRONMENTAL PLANNING/ MONITORING, AND PROBLEM SOLVING.

--- DEGREES OFFERED: THIS PROGRAM OFFERS A BACHELOR OF ARTS DEGREE MINOR IN ENVIRONMENTAL STUDIES.

- - - - - 27147 VERMILION COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'CONSERVATION (NATURAL RESOURCES) TECHNICIAN' PROGRAM IS DESIGNED TO TRAIN STUDENTS TO DEVELOP THE SKILLS AND COMPETENCIES THAT WILL PREPARE THEM FOR EMPLOYMENT IN THE VARIOUS CONSERVATION OCCUPATIONS. THE 'NATURAL RESOURCE LAW ENFORCEMENT' PROGRAM IS AN OPTION OF THIS PROGRAM.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE LENGTH OF THE CONSERVATION (NATURAL RESOURCES) TECHNICIAN PROGRAM IS 2 YEARS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE BOOKS AND MATERIALS.

- - - - - 81004 UNIVERSITY OF MINNESOTA - CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'NATURAL RESOURCES TECHNOLOGY' MAJOR OFFERS OPTIONS IN NATURAL RESOURCES CONSERVATION, BIOLOGICAL LABORATORY TECHNOLOGY, AND PARK AND RECREATIONAL AREA MANAGEMENT. THIS PROGRAM IS DESIGNED TO TRAIN STUDENTS FOR PARAPROFESSIONAL CAREERS IN CONSERVATION AND RECREATION. COURSES INCLUDE BIOLOGY, CHEMISTRY, ECOLOGY, ZOOLOGY, WILDLIFE, AND NATURAL RESOURCES AS WELL AS AN INTERNSHIP. THE OPTION IN

'BIOLOGICAL LABORATORY TECHNOLOGY' PROVIDES A BACKGROUND IN SCIENTIFIC PRINCIPLES AND TECHNOLOGY FOR STUDENTS WHO INTEND TO WORK AS BIOLOGICAL LABORATORY TECHNICIANS. THE COLLEGE OFFERS A TWO-YEAR PREPROFESSIONAL FORESTRY PROGRAM. STUDENTS COMPLETE TWO YEARS AT UMC AND THEN TRANSFER TO A BACCALAUREATE DEGREE PROGRAM IN FORESTRY AT THE UNIVERSITY'S ST. PAUL CAMPUS OR ANOTHER INSTITUTION.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IN NATURAL RESOURCES AND AN ASSOCIATE IN SCIENCE DEGREE IN FORESTRY ARE OFFERED.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE TWO YEARS IN LENGTH.

118 FORESTRY AND NATURAL RESOURCES TRANSFER PROGRAMS:

- - - - -	26072	MOORHEAD STATE UNIVERSITY
- - - - -	26074	WINONA STATE UNIVERSITY
- - - - -	26175	SOUTHWEST STATE UNIVERSITY
- - - - -	27139	AUSTIN COMMUNITY COLLEGE
- - - - -	27140	BRAINERD COMMUNITY COLLEGE
- - - - -	27142	FERGUS FALLS COMMUNITY COLLEGE
- - - - -	27143	HIBBING COMMUNITY COLLEGE
- - - - -	27144	ITASCA COMMUNITY COLLEGE
- - - - -	27145	WILLMAR COMMUNITY COLLEGE
- - - - -	27146	WORTHINGTON COMMUNITY COLLEGE
- - - - -	27148	ROCHESTER COMMUNITY COLLEGE
- - - - -	27149	NORTHLAND COMMUNITY COLLEGE
- - - - -	27150	MESABI COMMUNITY COLLEGE
- - - - -	27151	MINNEAPOLIS COMMUNITY COLLEGE
- - - - -	27152	ANOKA-RAMSEY COMMUNITY COLLEGE
- - - - -	27153	NORTH HENNEPIN COMMUNITY COLLEGE
- - - - -	27154	LAKEWOOD COMMUNITY COLLEGE
- - - - -	27155	RAINY RIVER COMMUNITY COLLEGE
- - - - -	27156	NORMANDALE COMMUNITY COLLEGE
- - - - -	27157	INVER HILLS COMMUNITY COLLEGE
- - - - -	81001	UNIVERSITY OF MINNESOTA (DULUTH)
- - - - -	81003	UNIVERSITY OF MINNESOTA (MORRIS)
- - - - -	83003	GOLDEN VALLEY LUTHERAN JUNIOR COLLEGE
- - - - -	84014	NORTHWESTERN COLLEGE
- - - - -	84015	PILLSBURY COLLEGE
- - - - -	84016	COLLEGE OF ST. BENEDICT
- - - - -	84018	ST. JOHN'S UNIVERSITY

119 FOREST PRODUCTS

Forest products programs prepare people for occupations as forestry technicians and for other positions such as graders and machine operators in the lumber and wood products industry. Two-year programs in forest technology are offered at many community colleges. These programs emphasize the application of forestry skills used in timberland management and timber production. Shorter logging programs concentrate on areas such as log truck driving or training for entry-level logging positions.

For information on programs in forestry and natural resources, see PROG 118.

---PROGRAM ADMISSION: Requirements vary. Usually community colleges require a high school diploma or its equivalent for admission.

---TYPICAL COURSE WORK: Course work varies with program length and emphasis. Most programs include all or many of the following courses:

Mapping	Forest Products
Photo Interpretation	Logging Methods
Mathematics	Surveying
Fire Control	Forest Operations
Botany	Drafting
Silviculture	Dendrology

Instruction includes extensive field experience, and laboratory and classroom work. See school catalogs for more information.

---GRADUATION REQUIREMENTS: Requirements vary with school, length of program, and program emphasis. See school catalogs for information.

---THINGS TO KNOW: Hard physical activity is required in some courses.

---RELATED PROGRAMS: PROG 118 Forestry and Natural Resources, 121 Fisheries and Wildlife Sciences, 113 Soil and Plant Sciences, 289 Woodworking, 288 Construction Trades.

---DIRECTLY RELATED OCCUPATIONS: DESC 4124 Foresters, 2632 Biologists.

ASSOCIATED OCCUPATIONS: DESC 2622 Soil Conservationists, 4514 Fallers, 4582 Woodworking Machine Operators, 2613 Horticulturists, 4132 Fish and Game Managers.

CIPS: 03.04

SCHOOLS:

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FOREST HARVESTING' PROGRAM PREPARES AN INDIVIDUAL TO PURCHASE, HARVEST, TRANSPORT AND MARKET TREES AS A CROP. THE PROGRAM PREPARES AN INDIVIDUAL TO MAINTAIN, SAFELY OPERATE, AND REPAIR LOGGING EQUIPMENT AND MACHINERY.

--- DEGREES OFFERED: A CERTIFICATE OR DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE LENGTH OF THE FOREST HARVESTING PROGRAM IS UP TO 46 WEEKS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$135 FOR BOOKS, SUPPLIES, AND EQUIPMENT.

- - - - - 27144 ITASCA COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'FORESTRY TECHNICIAN' PROGRAM PREPARES PEOPLE FOR JOBS SUCH AS TIMBER CRUISER, SURVEYOR'S AIDE, CREW LEADER, OR LOGGER. THE COURSE IS INTENSIVE AND HEAVY EMPHASIS IS PLACED ON FIELD WORK. ABOUT ONE HALF THE TIME IS SPENT OUTDOORS AND ONE HALF IN CLASSROOM STUDY. AREAS OF STUDY INCLUDE: FOREST TREES AND PLANTS, NURSERY STOCK, FOREST PROTECTION, SURVEYING, MEASUREMENT OF STUMPAGE, LOGGING, AND FOREST PRODUCT INDUSTRIES.

--- DEGREES OFFERED: A CERTIFICATE IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 6 MONTHS LONG. IT BEGINS IN OCTOBER AND ENDS IN MARCH.

119 FOREST PRODUCTS TRANSFER PROGRAMS:

- - - - - 81003 UNIVERSITY OF MINNESOTA (MORRIS)

Marine technology programs prepare students to understand underwater plant and animal life and the physical properties--such as tides, currents, and geology--of water bodies. These programs may prepare students to become marine technicians or commercial fishers, or to operate, work on, or repair fishing vessels. Program options include marine carpentry, marine engines, and fishing boat operation and maintenance. These programs are most often found at vocational schools and community colleges in coastal areas. They are usually two-year associate degree programs or shorter certificate programs. Many people learn these skills on the job, by family tradition or by working as deckhand helpers. Jobs in this field normally require Coast Guard or state commercial fishing licenses. (See PREP 4328 Commercial Fishers, 6159 Barge Loaders, or 1173 Military Officers)

--- PROGRAM ADMISSION: Most programs require a high school diploma or its equivalent. It is helpful to have a background in math, biology, natural sciences, diesel mechanics, welding, and shop work. Those currently in high school should follow a college prep program with a focus on science and math. Check entrance requirements for specific schools in their catalogs.

--- TYPICAL COURSE WORK: Most programs include classroom work, field trips on bodies of water and practical 'hands-on' experience in fishing and boat operation. General course work might include:

Survival at Sea	Emergency Medical Care
Piloting & Navigation	Coast Guard Regulations
Marine Ecology	Fire Fighting and Prevention
Marine Meteorology	Basic Marine Refrigeration
Welding	Woodworking
Diesel Engine Main-	Electronic Navigation Aids
tenance and Repair	Chemistry
Net Construction and	Marine Lab Techniques
Repair	Statistics
Fishing Methods (gill	College Algebra
netting, seining,	Drafting
longlining, potting)	Communications
Marine Electrical Systems	

--- THINGS TO KNOW: Work in canneries or on fishing boats is good preparation for programs in marine technology.

--- RELATED PROGRAMS: PROG 528 Oceanography, 121 Fisheries and Wildlife Sciences, 278 Gas and Diesel Mechanics (for engine maintenance and repair).

--- DIRECTLY RELATED OCCUPATIONS: DESC 4328 Commercial Fishers, 6159 Barge Loaders.

ASSOCIATED OCCUPATION: DESC 1173 Military Officers.

CIPS: 49.03

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MARINE ENGINE MECHANICS' PROGRAM PREPARES INDIVIDUALS TO TEST, MAINTAIN, AND REPAIR OUTBOARD, INBOARD-OUTBOARD, AND INBOARD ENGINES; TEST, MAINTAIN, AND REPAIR GEAR CASES, OUTDRIVES AND POWER TRANSMISSION UNITS; TROUBLESHOOT AND REPAIR ELECTRICAL

SYSTEMS; MAKE ADJUSTMENTS, REPAIRS, AND SET UPS; AND REPAIR METAL, WOOD, AND FIBERGLASS. A VARIETY OF WOOD, METAL, AND FIBERGLASS BOATS ARE USED.
--- LENGTH OF PROGRAM: THE MARINE ENGINE MECHANICS PROGRAM IS 18 MONTHS LONG.

- - - - - 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'MARINE ENGINE MECHANICS' PROGRAM PREPARES INDIVIDUALS TO TEST, MAINTAIN, AND REPAIR OUTBOARD, INBOARD-OUTBOARD, AND INBOARD ENGINES; TEST, MAINTAIN, AND REPAIR GEAR CASES, OUTDRIVES AND POWER TRANSMISSION UNITS; TROUBLESHOOT AND REPAIR ELECTRICAL SYSTEMS; MAKE ADJUSTMENTS, REPAIRS, AND SET UPS; AND REPAIR METAL, WOOD, AND FIBERGLASS. A VARIETY OF WOOD, METAL, AND FIBERGLASS BOATS ARE USED.
--- LENGTH OF PROGRAM: THE MARINE ENGINE MECHANICS PROGRAM IS 12 MONTHS LONG.

Programs in architecture and environmental design intend to teach people to apply design skills to modify our physical surroundings. A wide variety of program specialties are available.

Programs in architecture offer broad training in building design. Study involves how to create forms that are life-enhancing and that provide shelter and environmental protection for our activities. Programs in interior design include the study of architecture as it relates to building interiors. These programs usually include the study of various materials such as woods, plastics, metals, and fabrics and the study of furniture design. Landscape architecture is a broad environmental program area focusing on the wise use of land. Study includes land use planning activities, the analysis of environmental impact, and the detailed development of land and sites of all sizes and uses. Programs in urban design focus on structures and other physical elements which make up a city and promote social, psychological, and economic well-being. Programs in city, community, and regional planning (sometimes called urban planning), intend to prepare people to plan and implement solutions to community problems and to guide and prepare communities for future change. Environmental design programs stress problem-solving skills and awareness of environmental issues as they relate to the development of designs for interior and exterior environments.

A few community colleges offer one- or two-year programs related to architecture and environmental design such as interior decoration or design. Some also offer programs which are designed to transfer to a four-year college or university. Architecture programs which award a professional degree are accredited by the NAAB (National Architectural Accrediting Board). A first professional degree qualifies one for apprenticeship and the NCARB (National Council of Architecture Registration Board) registration exam which is administered by a State Board of Architectural Examiners. Most professional degree programs in architecture are found at universities, and are of three basic types: the five-year Bachelor of Architecture program; the three and one half-year Master of Architecture program for graduates of bachelor's degree programs in any major; and the two-year Master of Architecture program for students with a four-year degree in architecture or environmental design. Some four-year colleges and universities also offer graduate degree programs in fields related to architecture and environmental design.

---PROGRAM ADMISSION: A high school diploma or its equivalent is normally required for admission to undergraduate programs. Graduate programs are available for graduates of related or unrelated bachelor's degree programs, and vary in length from two to three and one half years. Schools report that admission to these programs is limited and competitive.

---TYPICAL COURSE WORK: Course work varies greatly with school, program, and emphasis. Besides background courses in social sciences, humanities, and English, programs usually include:

History of Art and	Geography
Architecture	Site Analysis
Principles of Design	Land Use
Architectural Design Studio	Planning Theory
Drawing	Political Science
Construction Materials	Economics

Landscape Concepts
Environmental Impact

Community Psychology
Environmental Issues

Instruction varies greatly according to specialty, but usually includes lectures, supported by research, design studios, field work, internships, and the writing of reports and essays. See college catalogs for complete program descriptions.

---GRADUATION REQUIREMENTS: Requirements vary. See college catalogs for more information.

---THINGS TO KNOW: Most of the fields related to architecture and environmental design have related professional societies or boards such as the National Architectural Accrediting Board (NAAB), the American Institute of Architects, the Foundation for Interior Design Education Research (FIDER), the American Society of Interior Designers, and the American Society of Landscape Architects (ASLA). Only registered architects may practice in any state and a degree from a NAAB accredited program is required, along with an apprenticeship, before one is eligible to sit for the licensing exam. Most states also require the licensing of landscape architects with a national exam coordinated by the ASLA. FIDER accredits programs in interior architecture and interior design. It may be useful to know if a particular program has been approved or accredited by the appropriate professional society or board.

---RELATED PROGRAMS: PROG 588 Area and Ethnic Studies, 586 Political Science, 584 Geography, 582 Anthropology, 583 Economics, 562 Public Administration, 311 Art, 288 Construction Trades.

---DIRECTLY RELATED OCCUPATIONS: DESC 2316 Architects, 2384 Landscape Architects, 2366 Interior Designers and Decorators.

ASSOCIATED OCCUPATIONS: DESC 2349 Civil Engineers, 2364 Drafters, 2146 Economists.

---REFERENCES:

National Architectural Accrediting Board (NAAB)
1735 New York Ave., NW
Washington, DC 20006

Foundation for Interior Design Education Research (FIDER)
242 W 27th St.
New York, NY 10001

American Society of Landscape Architects (ASLA)
1733 Connecticut Ave., NW
Washington, DC 20009

Board of Architecture, Engineering,
Land Surveying and Landscape Architecture
5th Floor Metro Square Building
7th & Robert Streets
St. Paul, MN 55101

CIPS: 04.

SCHOOLS:

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL
INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'INTERIOR DESIGN' PROGRAM PREPARES
INDIVIDUALS TO DESIGN INTERIORS. INSTRUCTION INCLUDES THE PROCESSES,
PROCEDURES, OBSERVATIONS, AND TECHNIQUES ESSENTIAL TO THE DEVELOPMENT OF
DESIGNS FOR INTERIOR ENVIRONMENTS.

--- DEGREES OFFERED: A DIPLOMA IN INTERIOR DESIGN IS OFFERED.

--- LENGTH OF PROGRAM: THE INTERIOR DESIGN PROGRAM IS 21 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$180 OVER 2 YEARS
FOR BOOKS, SUPPLIES, EQUIPMENT AND OTHER COSTS.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'INTERIOR DESIGN' PROGRAM PREPARES
INDIVIDUALS TO DESIGN INTERIORS. INSTRUCTION INCLUDES THE PROCESSES,
PROCEDURES, OBSERVATIONS, AND TECHNIQUES ESSENTIAL TO THE DEVELOPMENT OF
DESIGNS FOR INTERIOR ENVIRONMENTS.

--- DEGREES OFFERED: A CERTIFICATE AND A DEGREE OF OCCUPATIONAL
PROFICIENCY ARE OFFERED.

--- LENGTH OF PROGRAM: THE INTERIOR DESIGN PROGRAM IS 22 MONTHS LONG.

131 ARCHITECTURE AND ENVIRONMENTAL DESIGN TRANSFER PROGRAMS:

- - - - - 26070 BEMIDJI STATE UNIVERSITY
- - - - - 26072 MOORHEAD STATE UNIVERSITY
- - - - - 27139 AUSTIN COMMUNITY COLLEGE
- - - - - 27140 BRAINERD COMMUNITY COLLEGE
- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27144 ITASCA COMMUNITY COLLEGE
- - - - - 27145 WILLMAR COMMUNITY COLLEGE
- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE
- - - - - 27147 VERMILION COMMUNITY COLLEGE
- - - - - 27148 ROCHESTER COMMUNITY COLLEGE
- - - - - 27149 NORTHLAND COMMUNITY COLLEGE
- - - - - 27150 MESABI COMMUNITY COLLEGE
- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE
- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE
- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE
- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE
- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE
- - - - - 27156 NORMANDALE COMMUNITY COLLEGE
- - - - - 27157 INVER HILLS COMMUNITY COLLEGE
- - - - - 81003 UNIVERSITY OF MINNESOTA - MORRIS
- - - - - 83002 CROSIER SEMINARY JUNIOR COLLEGE
- - - - - 84004 CONCORDIA COLLEGE (MOORHEAD)
- - - - - 84005 CONCORDIA COLLEGE (ST. PAUL)
- - - - - 84007 GUSTAVUS ADOLPHUS COLLEGE
- - - - - 84013 NORTH CENTRAL BIBLE COLLEGE
- - - - - 84014 NORTHWESTERN COLLEGE
- - - - - 84015 PILLSBURY COLLEGE
- - - - - 84020 ST. OLAF COLLEGE

143 BANKING AND FINANCE

Banking and finance programs are designed to train people for occupations in the banking and finance industry. Some vocational schools offer short programs, usually a few weeks in length, to train bank tellers. Students learn about banking services and become familiar with the equipment and skills used by tellers. Longer programs, including two-year associate degree programs offered at community colleges and bachelor and graduate degree programs at universities, intend to provide students with an understanding of the financial operations of business enterprises. Two-year programs provide a background in financial theory and develop skills in financial statement analysis and accounting. Bachelor's and graduate programs provide a broader and more in-depth study of banking and financial theories and may offer options for specialization in areas such as corporate finance, securities, insurance, real estate, and financial institutions. Many banking and finance programs are offered as specialized options in business management and administration programs.

---PROGRAM ADMISSION: Admission requirements vary with type of program. A background in math and writing will enhance success.

---TYPICAL COURSE WORK: Most programs include the following core subjects:

Accounting	Math
Statistics	Economics
Business Law	Principles of Finance
Business Communication	

Additional course work usually includes:

- Securities and Investments
- Financial Institutions
- Credit Management
- Managerial Finance
- Money, Bond, and Equity Markets

Many programs offer cooperative education or internships for practical experience in the finance industry.

---GRADUATION REQUIREMENTS: Requirements vary with the length and emphasis of programs. See school catalogs for more details.

---THINGS TO KNOW: Many schools offer programs on a part-time basis, allowing students to complete programs with evening or late afternoon classes. Several community college programs are designed to enhance the abilities of persons already employed in the financial industry who desire greater promotional opportunities.

---RELATED PROGRAMS: PROG 145 Business Management and Administration, 146 Marketing and Sales, 157 Accounting.

---DIRECTLY RELATED OCCUPATIONS: DESC 1156 Credit Managers, 1643 Tellers, 7415 Securities Sales Agents, 1148 Bank Officers.

ASSOCIATED OCCUPATION: DESC 1138 Public Administrators.

CIPS: 06.03
06.10
07.02

SCHOOLS:

- - - - - 25004 AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BANKING AND FINANCE, GENERAL' PROGRAM PREPARES INDIVIDUALS TO PERFORM GENERAL FINANCIAL OR BANKING SERVICES. INSTRUCTION INCLUDES CREDIT COLLECTION, TRANSIT ROUTING OF NOTES AND DRAFTS, RECEIVING AND PAYING OUT MONEY, AND FUNCTIONS ASSOCIATED WITH PROCESSING LOANS AND INSURANCE CLAIMS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY AND A CLOCK HOUR CERTIFICATE ARE OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 10-1/2 MONTHS LONG.

--- SPECIAL COSTS: BOOKS AND SUPPLIES COST \$110. THERE IS A \$50 MISCELLANEOUS CHARGE.

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BANKING AND FINANCE, GENERAL' PROGRAM PREPARES INDIVIDUALS TO PERFORM GENERAL FINANCIAL OR BANKING SERVICES. INSTRUCTION INCLUDES CREDIT COLLECTION, TRANSIT ROUTING OF NOTES AND DRAFTS, RECEIVING AND PAYING OUT MONEY, AND FUNCTIONS ASSOCIATED WITH PROCESSING LOANS AND INSURANCE CLAIMS.

--- DEGREES OFFERED: A DIPLOMA OF COMPLETION AND A CERTIFICATE OF ATTENDANCE IN BANKING AND FINANCE ARE OFFERED.

--- LENGTH OF PROGRAM: THE BANKING AND FINANCE PROGRAM IS 10 1/2 MONTHS IN LENGTH

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$190 FOR BOOKS.

- - - - - 25021 PIPESTONE AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BANKING AND FINANCE, AGRICULTURE' PROGRAM PREPARES INDIVIDUALS TO PERFORM GENERAL FINANCIAL OR BANKING SERVICES. INSTRUCTION INCLUDES CREDIT COLLECTION, TRANSIT ROUTING OF NOTES AND DRAFTS, RECEIVING AND PAYING OUT MONEY, AND FUNCTIONS ASSOCIATED WITH PROCESSING LOANS AND INSURANCE CLAIMS. THE PROGRAM PREPARES INDIVIDUALS TO PERFORM AGRICULTURAL FINANCIAL OR BANKING SERVICES. THE EMPHASIS IS ON AGRICULTURAL BANKING AND RELATING CROP BANKING LOANS.

--- DEGREES OFFERED: STUDENTS WHO COMPLETE THIS PROGRAM ARE AWARDED A DEGREE OF OCCUPATIONAL PROFICIENCY.

--- LENGTH OF PROGRAM: THIS IS A 21 MONTH PROGRAM.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BANKING AND FINANCE, GENERAL' PROGRAM PREPARES INDIVIDUALS TO PERFORM GENERAL FINANCIAL OR BANKING SERVICES. INSTRUCTION INCLUDES CREDIT COLLECTION, TRANSIT ROUTING OF NOTES AND DRAFTS, RECEIVING AND PAYING OUT MONEY, AND FUNCTIONS ASSOCIATED WITH PROCESSING LOANS AND INSURANCE CLAIMS.

--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE BANKING AND FINANCE PROGRAM IS 10 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$140 FOR BOOKS, SUPPLIES AND EQUIPMENT.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BANKING AND FINANCE, GENERAL' PROGRAM PREPARES INDIVIDUALS TO PERFORM GENERAL FINANCIAL OR BANKING SERVICES. INSTRUCTION INCLUDES CREDIT COLLECTION, TRANSIT ROUTING OF NOTES AND

DRAFTS, RECEIVING AND PAYING OUT MONEY, AND FUNCTIONS ASSOCIATED WITH PROCESSING LOANS AND INSURANCE CLAIMS.

--- LENGTH OF PROGRAM: THE BANKING AND FINANCE, GENERAL PROGRAM IS NINE MONTHS LONG.

- - - - - 25032 EAST GRAND FORKS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BANKING AND FINANCE, GENERAL' PROGRAM PREPARES INDIVIDUALS TO PERFORM GENERAL FINANCIAL OR BANKING SERVICES. INSTRUCTION INCLUDES CREDIT COLLECTION, TRANSIT ROUTING OF NOTES AND DRAFTS, RECEIVING AND PAYING OUT MONEY, AND FUNCTIONS ASSOCIATED WITH PROCESSING LOANS AND INSURANCE CLAIMS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE BANKING AND FINANCE PROGRAM RANGES FROM 25 WEEKS TO 12 MONTHS.

- - - - - 25033 RED WING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BANKING AND FINANCE, AGRICULTURAL' PROGRAM PREPARES INDIVIDUALS TO PERFORM GENERAL FINANCIAL OR BANKING SERVICES. INSTRUCTION INCLUDES CREDIT COLLECTION, TRANSIT ROUTING OF NOTES AND DRAFTS, RECEIVING AND PAYING OUT MONEY, AND FUNCTIONS ASSOCIATED WITH PROCESSING LOANS AND INSURANCE CLAIMS. THE PROGRAM PREPARES INDIVIDUALS TO PERFORM AGRICULTURAL FINANCIAL OR BANKING SERVICES. THE EMPHASIS IS ON AGRICULTURAL BANKING AND RELATING CROP BANKING LOANS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: BANKING AND FINANCE, AGRICULTURAL IS AN 18 MONTH PROGRAM.

--- SPECIAL COSTS: BOOKS AND SUPPLIES WILL COST ABOUT \$175.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'FINANCIAL MANAGEMENT' PROGRAM PREPARES STUDENTS FOR MID-MANAGEMENT POSITIONS IN CREDIT AND FINANCIAL INSTITUTIONS. WHILE COMPLETING THE PROGRAM, STUDENTS MAY ALSO MEET THE REQUIREMENTS FOR THE ASSOCIATE AND FELLOW AWARDS OF THE NATIONAL INSTITUTE OF CREDIT. STUDENTS STUDY ACCOUNTING, DATA PROCESSING, CREDIT AND COLLECTIONS, CREDIT ANALYSIS, AND ECONOMICS AS WELL AS GENERAL BUSINESS AND GENERAL EDUCATION SUBJECTS.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2-YEAR PROGRAM.

143 BANKING AND FINANCE TRANSFER PROGRAMS:

- - - - - 27139 AUSTIN COMMUNITY COLLEGE
- - - - - 27140 BRAINERD COMMUNITY COLLEGE
- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE
- - - - - 27144 ITASCA COMMUNITY COLLEGE
- - - - - 27145 WILLMAR COMMUNITY COLLEGE
- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE
- - - - - 27147 VERMILION COMMUNITY COLLEGE
- - - - - 27148 ROCHESTER COMMUNITY COLLEGE
- - - - - 27149 NORTHLAND COMMUNITY COLLEGE
- - - - - 27150 MESABI COMMUNITY COLLEGE
- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE
- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE
- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE
- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE

- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE
- - - - - 27156 NORMANDALE COMMUNITY COLLEGE
- - - - - 83002 CROSIER SEMINARY JUNIOR COLLEGE
- - - - - 84013 NORTH CENTRAL BIBLE COLLEGE
- - - - - 84014 NORTHWESTERN COLLEGE
- - - - - 84015 PILLSBURY COLLEGE

145 BUSINESS MANAGEMENT AND ADMINISTRATION

Business management and administration programs prepare people to plan, organize, and control the activities of people and other resources in the operation of an organization. Programs usually emphasize theories and practices in the operation of businesses in private industry, however, some offer options in public administration. Programs vary from one- to two-year programs offered at community colleges and vocational schools to bachelor's and graduate degree programs at colleges and universities. Shorter programs usually train people for entry-level and mid-management positions in a specific business or industry. Bachelor's degree and graduate degree programs provide study of basic business theories and principles which provide a background for concentrated study in a more specialized aspect of business management or administration. Options for specialization include personnel management, business economics, organizational behavior, small business management, and international business.

---PROGRAM ADMISSION: Many schools offering bachelor degree programs require an application to the business program as well as to the school and may limit admission to students who have completed a number of college courses and attained a specified GPA level. Master's degree programs are available for students with undergraduate degrees in business or other fields of study and generally require that applicants take the Graduate Management Admission Test (GMAT).

---TYPICAL COURSE WORK: Most programs in business administration include the following core subjects:

Business Theory	Management
Business Law	Marketing
Economics	Data Processing
Finance	Business Communications
Statistics	

Additional courses depend on the chosen area of specialization.

---GRADUATION REQUIREMENTS: Requirements vary depending on length of program and school. See school catalogs for more information.

---THINGS TO KNOW: Many schools offer business programs that can be completed on a part-time basis, often with evening or late afternoon classes. Internships and cooperative work experience are available through some programs.

---RELATED PROGRAMS: PROG 157 Accounting, 143 Banking and Finance, 161 Hotel and Motel Management, 147 Real Estate, 146 Marketing and Sales, 148 Insurance, 583 Economics, 116 Agricultural Business and Management, 562 Public Administration, 272 Aviation Management, 288 Construction Trades, 399 Food Service.

---DIRECTLY RELATED OCCUPATIONS: DESC 1157 Store Managers, 1186 Personnel Officers, 1132 Hotel and Motel Managers, 1131 Restaurant Managers, 1138 Public Administrators.

ASSOCIATED OCCUPATIONS: DESC 1411 Office Managers.

CIPS: 06.01	06.13
06.04	06.15

06.05	06.16
06.06	06.18
06.0705	06.20
06.09	06.99
06.11	07.05
06.12	

SCHOOLS:

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS ADMINISTRATION MANAGEMENT, GENERAL' PROGRAM PREPARES INDIVIDUALS FOR THE GENERAL PLANNING, ORGANIZING AND CONTROLLING OF A BUSINESS, INCLUDING THE ORGANIZATIONAL AND HUMAN ASPECTS, WITH EMPHASIS ON THE VARIOUS THEORIES OF MANAGEMENT, THE KNOWLEDGE AND UNDERSTANDING NECESSARY FOR MANAGING PEOPLE AND FUNCTIONS, AND DECISION MAKING.

--- LENGTH OF PROGRAM: THIS PROGRAM IS NINE MONTHS LONG.

- - - - - 25005 BEMIDJI AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS ADMINISTRATION MANAGEMENT, GENERAL' PROGRAM PREPARES INDIVIDUALS FOR THE GENERAL PLANNING, ORGANIZING AND CONTROLLING OF A BUSINESS, INCLUDING THE ORGANIZATIONAL AND HUMAN ASPECTS, WITH EMPHASIS ON THE VARIOUS THEORIES OF MANAGEMENT, THE KNOWLEDGE AND UNDERSTANDING NECESSARY FOR MANAGING PEOPLE AND FUNCTIONS, AND DECISION MAKING.

--- LENGTH OF PROGRAM: THIS PROGRAM IS NINE MONTHS LONG.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS ADMINISTRATION MANAGEMENT GENERAL' PROGRAM PREPARES INDIVIDUALS FOR THE GENERAL PLANNING, ORGANIZING AND CONTROLLING OF A BUSINESS, INCLUDING THE ORGANIZATIONAL AND HUMAN ASPECTS, WITH EMPHASIS ON THE VARIOUS THEORIES OF MANAGEMENT, THE KNOWLEDGE AND UNDERSTANDING NECESSARY FOR MANAGING PEOPLE AND FUNCTIONS, AND DECISION MAKING.

--- DEGREES OFFERED: CERTIFICATES AND DEGREES OF OCCUPATIONAL PROFICIENCY ARE OFFERED.

--- LENGTH OF PROGRAM: THE BUSINESS MANAGEMENT PROGRAM IS 11 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE \$200 FOR BOOKS, SUPPLIES, EQUIPMENT AND OTHER COSTS.

- - - - - 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SMALL BUSINESS MANAGEMENT' PROGRAM DESCRIBES THE MANAGERIAL FUNCTIONS AND OWNERSHIP PRINCIPLES INVOLVED IN OPERATING A SMALL BUSINESS. IT DEVELOPS THE ENTREPRENEUR'S SKILLS IN ORGANIZING AND MANAGING A SMALL BUSINESS AND INCLUDES INSTRUCTION IN FINANCIAL CONTROLS AND ANALYSIS, RESOURCE MANAGEMENT, COMPUTER LITERACY, BUSINESS PLANNING AND MARKETING FOR MICROBUSINESS OWNERS.

--- DEGREES OFFERED: A SMALL BUSINESS MANAGEMENT DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 9 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$100 FOR BOOKS AND \$110 FOR FIELD TRIPS.

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS ADMINISTRATIVE MANAGEMENT' PROGRAM PREPARES INDIVIDUALS FOR THE GENERAL PLAN-

NING, ORGANIZING AND CONTROLLING OF A BUSINESS, INCLUDING THE ORGANIZATIONAL AND HUMAN ASPECTS, WITH EMPHASIS ON THE VARIOUS THEORIES OF MANAGEMENT, THE KNOWLEDGE AND UNDERSTANDING NECESSARY FOR MANAGING PEOPLE AND FUNCTIONS, AND DECISION MAKING.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THIS IS A 1-YEAR PROGRAM..

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$100 FOR BOOKS.

- - - - - 26070 BEMIDJI STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: 'INDUSTRIAL TECHNOLOGY' IS A MAN-AGEMENT ORIENTATED PROGRAM FOR INDIVIDUALS SEEKING TECHNICAL MANAGERIAL, PRODUCTION SUPERVISION, AND RELATED TYPES OF LEADERSHIP POSITIONS IN INDUSTRY. NINETY-FOUR QUARTER CREDITS ARE REQUIRED IN INDUSTRIAL TECHNOLOGY, PROFESSIONAL CORE, TECHNICAL PROCESSES, ADVANCED TECHNICAL PROCESS.

PROSPECTIVE SECONDARY (GRADES 7-12) AND VOCATIONAL TEACHERS WHO PLAN TO TEACH 'BUSINESS EDUCATION' MORE THAN HALF TIME FULFILL COURSEWORK REQUIREMENTS FOR A STATE OF MINNESOTA LICENSURE TO TEACH BUSINESS EDUCATION UP TO FULL TIME BY COMPLETING THIS 74-85 CREDIT MAJOR IN BUSINESS EDUCATION AND A 39-41 CREDIT SEQUENCE IN PROFESSIONAL EDUCATION INCLUDING STUDENT TEACHING.

THE BACHELOR OF SCIENCE MAJOR IN 'BUSINESS ADMINISTRATION' CONSISTS OF 88-111 CREDITS AND PROVIDES THE STUDENT WITH ADMINISTRATIVE SKILLS AS WELL AS BUSINESS PRINCIPLES/THEORY. COMMON COURSES INCLUDE: ACCOUNTING, BUSINESS LAW, ECONOMICS, INDUSTRIAL RELATIONS, MARKETING, SALES, ADVERTISING, AND INFORMATION SYSTEMS. OPTIONS/CONCENTRATIONS MAY BE AVAILABLE.

--- DEGREES OFFERED: AN ASSOCIATE OF SCIENCE DEGREE, A BACHELOR OF ARTS DEGREE AND A BACHELOR OF SCIENCE DEGREE ARE OFFERED.

--- LENGTH OF PROGRAM: THIS IS A ONE TO FOUR YEAR PROGRAM.

- - - - - 26072 MOORHEAD STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: A BACHELOR OF SCIENCE MAJOR IN 'MANAGEMENT' CONSISTS OF 74 CREDITS AND TRAINS THE STUDENT TO ENTER THE FIELD OF BUSINESS MANAGEMENT. COMMON COURSES INCLUDE: ACCOUNTING, BUSINESS LAW, ECONOMICS, INDUSTRIAL RELATIONS, MARKETING, SALES, ADVERTISING, AND INFORMATION SYSTEMS.

THE BACHELOR OF ARTS MAJOR IN 'BUSINESS ADMINISTRATION' CONSISTS OF 73-74 CREDITS AND PROVIDES THE STUDENT WITH ADMINISTRATIVE SKILLS AS WELL AS BUSINESS PRINCIPLES AND THEORY. COMMON COURSES INCLUDE: ACCOUNTING, BUSINESS LAW, ECONOMICS, INDUSTRIAL RELATIONS, MARKETING, SALES, ADVERTISING, AND INFORMATION SYSTEMS. AN ASSOCIATE IN SCIENCE IN BUSINESS ADMINISTRATION IS ALSO OFFERED.

THE MASTERS IN 'BUSINESS ADMINISTRATION' PROGRAM PROVIDES A BROAD STUDY OF THE INTERRELATED AREAS OF BUSINESS ADMINISTRATION TO PREPARE CANDIDATES FOR POSITIONS IN BUSINESS, GOVERNMENT, OR TEACHING. COMMON COMPONENTS OF THE MBA INCLUDE: POLICY FORMULATION/IMPLEMENTATION, ACCOUNTING, MANAGEMENT, MARKETING, FINANCE, ECONOMICS AND INFORMATION.

--- DEGREES OFFERED: AN ASSOCIATE OF SCIENCE DEGREE, A BACHELOR OF SCIENCE DEGREE, A BACHELOR OF ARTS DEGREE, AND A MASTER OF SCIENCE ARE OFFERED.

- - - - - 26175 SOUTHWEST STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: AN ASSOCIATE OF SCIENCE DEGREE PROGRAM IN 'BUSINESS ADMINISTRATION' CONSISTS OF 40 CREDITS OF BUSINESS CORE COURSES, INCLUDING ECONOMICS, MANAGEMENT, MARKETING AND DATA PROCESSING PLUS 8 CREDITS OF BUSINESS ELECTIVES TO BE CHOSEN FROM AREAS OF SPECIAL INTEREST AND USE TO THE STUDENT. THE PROGRAM GIVES STUDENTS A BASIC BACKGROUND IN BUSINESS.

THE BACHELOR OF SCIENCE MAJOR IN 'BUSINESS ADMINISTRATION' CONSISTS OF 80 CREDITS AND PROVIDES THE STUDENT WITH ADMINISTRATIVE SKILLS AS WELL AS AN EXPOSURE TO BUSINESS PRINCIPLES AND THEORY. CONCENTRATIONS ARE AVAILABLE IN THE AREAS OF FINANCE, GENERAL BUSINESS, MANAGEMENT SCIENCE, AND SMALL BUSINESS MANAGEMENT.

--- DEGREES OFFERED: AN ASSOCIATE OF SCIENCE DEGREE IN BUSINESS ADMINISTRATION AND A BACHELOR OF SCIENCE DEGREE IN BUSINESS ADMINISTRATION AND MANAGEMENT ARE OFFERED.

--- LENGTH OF PROGRAM: THIS IS A TWO YEAR AND BACCALAUREATE PROGRAM.

- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: SOME OF THE 'BUSINESS ADMINISTRATION' COURSES OFFERED ARE PRIMARILY INTENDED FOR THE STUDENT WHO WILL SEEK EMPLOYMENT AFTER TWO YEARS OF HIGHER EDUCATION. BUSINESS STUDENTS MAY WISH TO ELECT SEVERAL OF THESE COURSES EITHER FOR GENERAL BACKGROUND OR TO MEET FUTURE SPECIFIC REQUIREMENTS. SOME COURSES OFFERED ARE: ECONOMICS, ACCOUNTING, MANAGEMENT, MARKETING, ADVERTISING, BUSINESS LAW, AND SALES.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE BUSINESS PROGRAM IS 2 YEARS LONG.

- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS MANAGEMENT' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR THE OWNERSHIP AND MANAGEMENT OF A BUSINESS. AFTER COMPLETION OF THIS PROGRAM, STUDENTS WILL ALSO BE PREPARED FOR A VARIETY OF OPPORTUNITIES FOR IMMEDIATE EMPLOYMENT IN BUSINESS.

--- DEGREES OFFERED: AN ASSOCIATE OF APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE BUSINESS MANAGEMENT PROGRAM IS TWO YEARS LONG.

- - - - - 27148 ROCHESTER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'GENERAL STUDIES IN BUSINESS' PROGRAM IS DESIGNED FOR STUDENTS WHO WISH TO PREPARE THEMSELVES WITH CAREER SKILLS FOR EMPLOYMENT IN THE FIELD OF BUSINESS.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS TWO YEARS LONG.

- - - - - 27149 NORTHLAND COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS ADMINISTRATION' CURRICULUM IS DESIGNED FOR STUDENTS WHO MAY CHOOSE TO ENTER CAREERS IN THE BUSINESS FIELD. THE CREDITS MAY ALSO TRANSFER TO A FOUR YEAR COLLEGE. REQUIRED COURSES INCLUDE BUSINESS MANAGEMENT, BUSINESS MACHINES, MATH, RECORDS ADMINISTRATION, ACCOUNTING, AND ECONOMICS. DURING THE SECOND YEAR STUDENTS COMPLETE A 16 CREDIT INTERNSHIP.

--- DEGREES OFFERED: STUDENTS EARN AN ASSOCIATE IN ARTS DEGREE WITH AN OCCUPATIONAL ENDORSEMENT.

--- LENGTH OF PROGRAM: BUSINESS ADMINISTRATION IS A 2 YEAR PROGRAM.

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS' PROGRAM OFFERS AN OPTION IN

'MID-MANAGEMENT' WHICH MAY TRAIN STUDENTS FOR BUSINESS CAREERS. THE 'TRANSPORTATION MANAGEMENT' PROGRAM PREPARES IN-SERVICE EMPLOYEES FOR POSSIBLE ADVANCEMENT TO MANAGEMENT AND MARKETING IN THE TRANSPORTATION INDUSTRY AND PREPARES PRE-SERVICE STUDENTS FOR ENTRY LEVEL POSITIONS. THIS PROGRAM MAY BE COMPLETED BY TAKING ALL COURSES IN THE EVENING. THE 'MANUFACTURING MANAGEMENT' PROGRAM PROVIDES STUDENTS WITH ENTRY LEVEL MANUFACTURING SUPERVISORY SKILLS. IT IS OFFERED JOINTLY WITH THE HENNEPIN TECHNICAL CENTERS.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED IN EACH PROGRAM.

--- LENGTH OF PROGRAM: THESE ARE TWO YEAR PROGRAMS.

- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS MANAGEMENT' PROGRAM PREPARES STUDENTS FOR ENTRY LEVEL JOBS IN BUSINESS MANAGEMENT. ALL COURSES ARE OFFERED IN THE EVENING AND/OR SATURDAYS TO ACCOMMODATE WORKING ADULTS. THIS COURSE PROVIDES AN OPPORTUNITY TO PREPARE FOR ADVANCEMENT IN CURRENT JOBS.

--- DEGREES OFFERED: THE ASSOCIATE OF APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 90 QUARTER CREDIT HOUR COURSE.

- - - - - 27156 NORMANDALE COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'SMALL BUSINESS MANAGEMENT' PROGRAM PREPARES STUDENTS FOR CAREERS IN SMALL BUSINESS AND FRANCHISE MANAGEMENT AND ALLOWS FOR PROFESSIONAL IMPROVEMENT FOR PERSONNEL PRESENTLY EMPLOYED IN THE FIELD. STUDENTS COMPLETE COURSES IN A SPECIALIZED SMALL BUSINESS PROGRAM, AS WELL AS OPTIONS IN RETAIL, COMPUTERS IN BUSINESS AND SALES/MARKETING.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE MANAGEMENT PROGRAM IS TWO YEARS LONG.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: SIX MANAGEMENT PROGRAMS ARE OFFERED: 'SMALL BUSINESS MANAGEMENT', 'RETAIL OPERATIONS MANAGEMENT', 'SUPERVISORY MANAGEMENT', 'TRANSPORTATION MANAGEMENT' AND 'HEALTH CARE MANAGEMENT'. THESE PROGRAMS PREPARE STUDENTS FOR ENTRY LEVEL MANAGEMENT OR SUPERVISORY POSITIONS AND/OR UPGRADE PEOPLE FOR CAREERS IN DIFFERENT BUSINESS SETTINGS. THE 'CONSTRUCTION MANAGEMENT' PROGRAM PREPARES PEOPLE ALREADY SKILLED IN THE CONSTRUCTION TRADES FOR SUPERVISORY/MANAGERIAL POSITIONS IN THE CONSTRUCTION INDUSTRY AND IN THOSE INDUSTRIES WHICH SUPPLY AND/OR PROVIDE RELATED SERVICES TO CONSTRUCTION.

--- DEGREES OFFERED: A VOCATIONAL CERTIFICATE AND AN ASSOCIATE DEGREE ARE OFFERED IN ALL PROGRAMS.

--- LENGTH OF PROGRAM: ONE AND TWO YEAR PROGRAMS ARE AVAILABLE IN ALL AREAS EXCEPT CONSTRUCTION MANAGEMENT WHICH IS 2 YEARS LONG.

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS ADMINISTRATION' PROGRAM IN THE SCHOOL OF MANAGEMENT OFFERS GENERAL TRAINING FOR THOSE WHO WANT TO ENTER BUSINESS OR DO GRADUATE STUDY IN THE FIELD. THIS PROGRAM CAN BE COMPLETED THROUGH EXTENSION COURSES. THE SCHOOL OF MANAGEMENT ALSO OFFERS JOINT PROGRAMS WITH THE COLLEGE OF AGRICULTURE IN 'AGRICULTURAL BUSINESS ADMINISTRATION'. IN BOTH OF THESE PROGRAMS, STUDENTS ARE ADMITTED TO THE SCHOOL OF MANAGEMENT FOR THEIR THIRD YEAR OF COLLEGE. CONTINUING EDUCATION AND EXTENSION ALSO OFFERS THE 'MANAGEMENT OF ADMINISTRATIVE SERVICES' (EITHER 46-48 OR 91-92 CREDITS), 'INDUSTRIAL RELATIONS' (45 CREDITS), AND

'BUSINESS ADMINISTRATION' (EITHER 45-46 OR 90-91 CREDITS) PROGRAMS. THE 'CREDIT AND FINANCIAL MANAGEMENT' CERTIFICATE PROGRAM IS OFFERED BY CONTINUING EDUCATION AND EXTENSION IN COOPERATION WITH THE SCHOOL OF MANAGEMENT AND THE NORTH CENTRAL CREDIT AND FINANCIAL MANAGEMENT ASSOCIATION. IT IS DIRECTED TOWARD PEOPLE SEEKING JOBS IN TRADE CREDIT, BANK, AND FINANCE COMPANY MANAGEMENT. STUDENTS COMPLETE 63-65 CREDITS IN AREAS SUCH AS ACCOUNTING, BUSINESS LAW, BUSINESS FINANCE, AND MANAGEMENT. UPON COMPLETION, STUDENTS ARE ELIGIBLE FOR THE ASSOCIATE AND FELLOW AWARDS OF THE NATIONAL INSTITUTE OF CREDIT.

--- DEGREES OFFERED: THE C.E.E. PROGRAMS OFFER CERTIFICATES. THE SCHOOL OF MANAGEMENT PROGRAMS OFFERS BACHELOR OF SCIENCE DEGREES. GRADUATE LEVEL PROGRAMS ARE THE MASTER OF ARTS AND DOCTOR OF PHILOSOPHY IN INDUSTRIAL RELATIONS; THE MASTER OF BUSINESS TAXATION PROGRAM; AND THE MASTER OF BUSINESS ADMINISTRATION AND PH.D PROGRAMS IN BUSINESS ADMINISTRATION. THE M.B.A. CAN ALSO BE EARNED THROUGH THE EVENING M.B.A. PROGRAM AND THE MANAGER'S M.B.A, A WEEKEND PROGRAM.

- - - - - 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: PROGRAMS ARE OFFERED IN 'BUSINESS ADMINISTRATION' WITH OPTIONS IN SALES AND MARKETING, SMALL BUSINESS, RETAIL, REAL ESTATE, BANKING, FINANCIAL MANAGEMENT, GENERAL BUSINESS ADMINISTRATION AND FASHION MERCHANDISING. THE PROGRAMS PROVIDES STUDENTS WITH A BASIC BUSINESS BACKGROUND AS WELL AS SPECIALIZED TRAINING IN THEIR CHOSEN FIELD.

--- DEGREES OFFERED: ASSOCIATE IN APPLIED SCIENCE DEGREES IN THE BUSINESS ADMINISTRATION DEPARTMENT MAJOR ARE OFFERED.

--- LENGTH OF PROGRAM: THESE ARE TWO YEAR PROGRAMS.

- - - - - 82027 MINNESOTA SCHOOL OF BUSINESS

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS MANAGEMENT' PROGRAM PREPARES STUDENTS FOR ENTRY LEVEL POSITIONS IN SALES, SALES MANAGEMENT, OFFICE MANAGEMENT, SUPERVISION, RETAIL MANAGEMENT, AND OTHER BUSINESS ADMINISTRATION CAREERS. COURSES INCLUDE BUSINESS COMMUNICATIONS, PRINCIPLES OF MANAGEMENT, TYPING, ACCOUNT-ING, AND BUSINESS LAW.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE LENGTH OF THIS PROGRAM IS 72 WEEKS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS AND EQUIPMENT.

- - - - - 82039 ST. CLOUD BUSINESS COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS ADMINISTRATION' PROGRAM TRAINS STUDENTS FOR MID-MANAGEMENT AND SALES POSITIONS IN BUSINESS AND INDUSTRY. STUDENTS STUDY A BROAD RANGE OF COURSES, INCLUDING BASIC BUSINESS COURSES SUCH AS TYPING, BUSINESS MACHINES, AND BUSINESS MATH, AS WELL AS BUSINESS AREAS SUCH AS MANAGEMENT, MARKETING, SALES, AND ACCOUNTING.

--- DEGREES OFFERED: GRADUATES OF THIS PROGRAM RECEIVE DIPLOMAS.

--- LENGTH OF PROGRAM: THE AVERAGE LENGTH OF THIS PROGRAM IS 4 QUARTERS, HOWEVER, THE LENGTH MAY VARY DEPENDING ON THE INDIVIDUAL STUDENT'S EDUCATION, EXPERIENCE, AND ABILITIES.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

145 BUSINESS MANAGEMENT AND ADMINISTRATION TRANSFER PROGRAMS:
- - - - - 27139 AUSTIN COMMUNITY COLLEGE
- - - - - 27140 BRAINERD COMMUNITY COLLEGE
- - - - - 27144 ITASCA COMMUNITY COLLEGE
- - - - - 27147 VERMILION COMMUNITY COLLEGE
- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE
- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE
- - - - - 27156 NORMANDALE COMMUNITY COLLEGE
- - - - - 83001 BETHANY LUTHERAN JUNIOR COLLEGE
- - - - - 83002 CROSIER SEMINARY JUNIOR COLLEGE
- - - - - 83003 GOLDEN VALLEY LUTHERAN JUNIOR COLLEGE
- - - - - 84013 NORTH CENTRAL BIBLE COLLEGE
- - - - - 84015 PILLSBURY COLLEGE
- - - - - 84021 ST. PAUL BIBLE COLLEGE

Marketing and sales programs are designed to prepare people for careers in areas such as retail and wholesale sales, marketing management, product planning, market research, and product display, promotion, and distribution. Many four-year colleges and universities offer bachelor's, master's, and doctoral programs in marketing and sales. Most community colleges offer two-year associate programs which can be transferred to a four-year college or university. Some community colleges offer one-year programs designed to prepare people for entry-level positions in retail sales. Business colleges also offer one-year (or less) certificate programs designed to prepare people for occupations in retail sales.

---PROGRAM ADMISSION: A high school diploma or its equivalent is normally required for admission to college and university undergraduate programs. A bachelor's degree in marketing, or in a related field, is usually required for admission to graduate programs. Schools offering one-year (or less) sales training programs may or may not require that applicants have a high school diploma. See school catalogs for complete information.

---TYPICAL COURSE WORK: Course work varies greatly with school, length of program, and emphasis. Longer programs usually include all or most of the following courses:

Marketing Systems	Data Analysis
Marketing Concepts	Advertising
Retail Administration	Purchasing
Marketing Problems	Consumer Issues

Instruction is by lecture, class discussion, reading, research, and the writing of reports and essays. Some programs may encourage or require that students gain on-the-job experience in internship programs. Four-year programs also include liberal arts courses, such as English composition, history, speech, and health. See school catalogs for specific descriptions of course work.

---GRADUATION REQUIREMENTS: Requirements vary with school, emphasis, and length of program. See school catalogs for more information.

---THINGS TO KNOW: A bachelor degree in marketing is sometimes used as a background for graduate work in business administration.

---RELATED PROGRAMS: PROG 145 Business Management and Administration, 148 Insurance, 157 Accounting.

---DIRECTLY RELATED OCCUPATIONS: DESC 7425 Sales Representatives, 7418 Automobile Salespeople, 7436 Buyers, Retail and Wholesale, 7434 Route Drivers, 7415 Securities Sales Agents, 7424 Salespersons, 2335 Market Research Workers, 7466 Computer Salespersons.

ASSOCIATED OCCUPATIONS: DESC 1157 Store Managers, 1195 Public Relations Workers.

CIPS: 08. (except 08.10)
06.14

SCHOOLS:

- - - - - 25001 ALBERT LEA AREA VOCATIONAL TECHNICAL
INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MARKETING MANAGEMENT' PROGRAM DESCRIBES THE PRINCIPLES, PRACTICES, AND CONCEPTS INVOLVED IN THE PERFORMANCE OF BUSINESS ACTIVITIES WHICH DIRECT THE TRANSFER OF GOODS AND THE ACQUISITION OF SERVICES FROM PRODUCER TO CONSUMER. THIS PROGRAM PREPARES INDIVIDUALS TO APPLY MARKETING SKILLS IN A MANAGEMENT POSITION IN ANY INDUSTRY, GENERALLY AT A MID-MANAGEMENT LEVEL OR IN A MANAGEMENT-TRAINING PROGRAM. INSTRUCTION INCLUDES MARKETING FUNCTIONS AND INSTITUTIONS; ACTIVITIES HAVING TO DO WITH EFFECTING CHANGE IN OWNERSHIP AND POSSESSION OF GOODS AND SERVICES; AND THE STUDY OF APPLIED ECONOMICS RELATING TO THE CREATION OF TIME, PLACE, AND POSSESSION UTILITY.

THE 'TRAVEL SERVICES MARKETING' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT FUNCTIONS AND TASKS IN ENTERPRISES ENGAGED IN TRAVEL SERVICE MARKETING TO FURNISH TRAVEL INFORMATION AND TO ACT AS AGENTS. INSTRUCTION IN ARRANGING TOURS AND TRANSPORTATION IS INCLUDED.

--- DEGREES OFFERED: A DIPLOMA IN MARKETING MANAGEMENT OR TRAVEL SERVICES IS OFFERED.

--- LENGTH OF PROGRAM: THE MARKETING MANAGEMENT PROGRAM IS 19 MONTHS LONG, AND THE TRAVEL SERVICES PROGRAM IS 9 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$165 THE FIRST YEAR AND \$140 THE SECOND YEAR FOR BOOKS AND SUPPLIES FOR MARKETING MANAGEMENT. PROGRAM RELATED COSTS FOR FOR TRAVEL SERVICES IS \$70.

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL
INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GENERAL MERCHANDISING/RETAIL SALES' PROGRAM PREPARES INDIVIDUALS IN SALES AND MARKETING. INSTRUCTION IN THE APPLICATION OF MARKETING SKILLS IN RETAIL ESTABLISHMENTS OR ANY INDUSTRY AND PREPARATION FOR ADVANCEMENT TO MORE SPECIALIZED TRAINING IN MARKETING IS INCLUDED.

THE 'FASHION MERCHANDISING' PROGRAM INCLUDES INSTRUCTION IN MANAGEMENT FUNCTIONS IN THE DISTRIBUTION OF APPAREL AND ACCESSORIES, FASHION MANAGEMENT, FASHION SELLING, FASHION BUYING, FASHION CYCLES, FASHION COORDINATION, AND SPECIALIZED CONSULTING SERVICES.

THE 'FINANCIAL SERVICES MARKETING, GENERAL' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING FUNCTIONS AND TASKS IN FINANCIAL INSTITUTIONS SUCH AS COMMERCIAL BANKS, SAVINGS AND LOAN ASSOCIATIONS, CREDIT AGENCIES, CREDIT UNIONS, CONSUMER-FINANCE COMPANIES, COLLECTION AGENCIES, SECURITY AND COMMODITY BROKERAGES, AND CREDIT DEPARTMENTS OF BUSINESS ENTERPRISES. INSTRUCTION INCLUDES THE PROMOTION AND TRANSACTION OF FINANCIAL SERVICES INCLUDING FINANCIAL COUNSELING.

THE 'PARTS SALES AND SERVICE' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT FUNCTIONS AND TASKS IN RETAIL OR WHOLESALE ESTABLISHMENTS ENGAGED IN THE DISTRIBUTION OF PARTS. IT PREPARES INDIVIDUALS TO ORDER, DISPENSE AND INVENTORY PARTS AND ACCESSORIES DEALING WITH THE AUTOMOTIVE, AGRICULTURAL AND RECREATIONAL VEHICLE INDUSTRIES. INSTRUCTION IN MERCHANDISING, DISPLAY WORK, BILLING, AND COMPUTER OPERATION AS WELL AS WARRANTIES, SHIPPING, AND WAREHOUSE PROCEDURES IS INCLUDED.

THE 'MARKETING MANAGEMENT' PROGRAM DESCRIBES THE PRINCIPLES, PRACTICES, AND CONCEPTS INVOLVED IN THE PERFORMANCE OF BUSINESS ACTIVITIES WHICH DIRECT THE TRANSFER OF GOODS AND THE ACQUISITION OF SERVICES FROM PRODUCER TO CONSUMER. THIS PROGRAM PREPARES INDIVIDUALS TO APPLY MARKETING SKILLS IN A

MANAGEMENT POSITION IN ANY INDUSTRY, GENERALLY AT A MID-MANAGEMENT LEVEL OR IN A MANAGEMENT TRAINING PROGRAM. INSTRUCTION INCLUDES MARKETING FUNCTIONS AND INSTITUTIONS; ACTIVITIES HAVING TO DO WITH EFFECTING CHANGE IN OWNERSHIP AND POSSESSION OF GOODS AND SERVICES; AND THE STUDY OF APPLIED ECONOMICS RELATING TO THE CREATION OF TIME, PLACE, AND POSSESSION UTILITY.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED IN EACH OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THE GENERAL MERCHANDISING/RETAIL PROGRAM AND MARKETING MANAGEMENT PROGRAM ARE 21 MONTHS LONG WHILE THE FASHION MERCHANDISING PROGRAM IS 18 MONTHS LONG. THE FINANCIAL SERVICES MARKETING AND PARTS SALES AND SERVICES PROGRAMS ARE 19 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR THE FASHION MERCHANDISING, PARTS SALES AND THE GENERAL MERCHANDISING PROGRAMS ARE EACH \$180 FOR BOOKS, EQUIPMENT AND OTHER SUPPLIES. BOOKS AND SUPPLIES FOR FINANCE AND CREDIT MANAGEMENT COST \$105/SCHOOL YEAR.

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MARKETING MANAGEMENT' PROGRAM DESCRIBES THE PRINCIPLES, PRACTICES, AND CONCEPTS INVOLVED IN THE PERFORMANCE OF BUSINESS ACTIVITIES WHICH DIRECT THE TRANSFER OF GOODS AND THE ACQUISITION OF SERVICES FROM PRODUCER TO CONSUMER. THIS PROGRAM PREPARES INDIVIDUALS TO APPLY MARKETING SKILLS IN A MANAGEMENT POSITION IN ANY INDUSTRY, GENERALLY AT A MID-MANAGEMENT LEVEL OR IN A MANAGEMENT-TRAINING PROGRAM. INSTRUCTION INCLUDES MARKETING FUNCTIONS AND INSTITUTIONS; ACTIVITIES HAVING TO DO WITH EFFECTING CHANGE IN OWNERSHIP AND POSSESSION OF GOODS AND SERVICES; AND THE STUDY OF APPLIED ECONOMICS RELATING TO THE CREATION OF TIME, PLACE, AND POSSESSION UTILITY.

THE 'FASHION MERCHANDISING' PROGRAM INCLUDES INSTRUCTION IN MANAGEMENT FUNCTIONS IN THE DISTRIBUTION OF APPAREL AND ACCESSORIES, FASHION MANAGEMENT, FASHION SELLING, FASHION BUYING, FASHION CYCLES, FASHION COORDINATION, AND SPECIALIZED CONSULTING SERVICES.

THE 'INTERNATIONAL MARKETING' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING ACTIVITIES IN ENTERPRISES PRIMARILY ENGAGED IN EXPORTING OR IMPORTING INDUSTRIAL AND CONSUMER GOODS IN WORLD MARKETS. INSTRUCTION IN TRADE CONTROLS, FOREIGN TRADE OPERATIONS, LOCATING MARKETS, NEGOTIATION PRACTICES, MONETARY ISSUES, AND INTERNATIONAL PUBLIC RELATIONS IS INCLUDED. THE 'PARTS SALES AND SERVICE' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT FUNCTIONS AND TASKS IN RETAIL OR WHOLESALE ESTABLISHMENTS ENGAGED IN THE DISTRIBUTION OF PARTS. IT PREPARES INDIVIDUALS TO ORDER, DISPENSE AND INVENTORY PARTS AND ACCESSORIES DEALING WITH THE AUTOMOTIVE, AGRICULTURAL AND RECREATIONAL VEHICLE INDUSTRIES. INSTRUCTION IN MERCHANDISING, DISPLAY WORK, BILLING AND COMPUTER OPERATION AS WELL AS WARRANTIES, SHIPPING, AND WAREHOUSE PROCEDURES IS INCLUDED.

--- DEGREES OFFERED: DIPLOMAS ARE OFFERED.

--- LENGTH OF PROGRAM: THE MARKETING MANAGEMENT PROGRAM IS 20 1/2 MONTHS LONG WHILE THE FASHION MERCHANDISING IS 37 WEEKS AND INTERNATIONAL MARKETING IS 11 MONTHS LONG. THE PARTS PROGRAM IS 36 WEEKS LONG.

--- SPECIAL COSTS: AUTO PARTS REQUIRES A \$10 LAB FEE.

- - - - - 25004 AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PROFESSIONAL AND INDUSTRIAL SALES' PROGRAM PREPARES INDIVIDUALS TO SERVE AS AGENTS OR SALES REPRESENTATIVES FOR MANUFACTURERS AND TO SELL A SPECIAL LINE OF PRODUCTS TO OTHER BUSINESSES, FACTORIES, PROFESSIONAL WORKERS, AND PUBLIC AND PRIVATE INSTITUTIONS. INSTRUCTION IN SALES, ADVERTISING, COMMUNICATIONS, TIME AND TERRITORY MANAGEMENT, SALES MANAGEMENT, AND MARKETING IS INCLUDED.

THE 'MARKETING MANAGEMENT' PROGRAM DESCRIBES THE PRINCIPLES, PRACTICES, AND CONCEPTS INVOLVED IN THE PERFORMANCE OF BUSINESS ACTIVITIES WHICH DIRECT THE TRANSFER OF GOODS AND THE ACQUISITION OF SERVICES FROM PRODUCER TO CONSUMER. THIS PROGRAM PREPARES INDIVIDUALS TO APPLY MARKETING SKILLS IN A MANAGEMENT POSITION IN ANY INDUSTRY, GENERALLY AT A MID-MANAGEMENT LEVEL OR IN A MANAGEMENT-TRAINING PROGRAM. INSTRUCTION INCLUDES MARKETING FUNCTIONS AND INSTITUTIONS; ACTIVITIES HAVING TO DO WITH EFFECTING CHANGE IN OWNERSHIP AND POSSESSION OF GOODS AND SERVICES; AND THE STUDY OF APPLIED ECONOMICS RELATING TO THE CREATION OF TIME, PLACE, AND POSSESSION UTILITY. THE 'PARTS SALES AND SERVICE' PROGRAM PREPARES INDIVIDUALS TO ORDER DISPENSE AND INVENTORY PARTS AND ACCESSORIES DEALING WITH THE AUTOMOTIVE, AGRICULTURAL AND RECREATIONAL VEHICLE INDUSTRIES. INSTRUCTION IN MERCHANDISING, DISPLAY WORK, BILLING AND COMPUTER OPERATION AS WELL AS WARRANTIES, SHIPPING, AND WAREHOUSE PROCEDURES IS INCLUDED.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY AND A TRADE CERTIFICATE IN PARTS IS OFFERED.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE 10 1/2-11 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$85 FOR BOOKS AND SUPPLIES AND A \$50 MISCELLANEOUS CHARGE IN THE PROFESSIONAL SALES PROGRAM. COSTS FOR THE PARTS PROGRAM INCLUDE \$10 FOR TOOLS, \$40 FOR BOOKS AND SUPPLIES, \$10 FOR UNIFORMS, \$5 FOR SAFETY EQUIPMENT AND A \$50 MISCELLANEOUS CHARGE.

- - - - - 25005 BEMIDJI AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MARKETING MANAGEMENT' PROGRAM DESCRIBES THE PRINCIPLES, PRACTICES, AND CONCEPTS INVOLVED IN THE PERFORMANCE OF BUSINESS ACTIVITIES WHICH DIRECT THE TRANSFER OF GOODS AND THE ACQUISITION OF SERVICES FROM PRODUCER TO CONSUMER. THIS PROGRAM PREPARES INDIVIDUALS TO APPLY MARKETING SKILLS IN A MANAGEMENT POSITION IN ANY INDUSTRY, GENERALLY AT A MID-MANAGEMENT LEVEL OR IN A MANAGEMENT-TRAINING PROGRAM. INSTRUCTION INCLUDES MARKETING FUNCTIONS AND INSTITUTIONS; ACTIVITIES HAVING TO DO WITH EFFECTING CHANGE IN OWNERSHIP AND POSSESSION OF GOODS AND SERVICES; AND THE STUDY OF APPLIED ECONOMICS RELATING TO THE CREATION OF TIME, PLACE, AND POSSESSION UTILITY.

--- DEGREES OFFERED: A DIPLOMA FOR ONE YEAR, A DEGREE OF OCCUPATIONAL PROFICIENCY FOR 2 YEARS, AND AN ATTENDANCE CERTIFICATE ARE OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 18 MONTHS LONG.

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GENERAL MERCHANDISING/ RETAIL SALES' PROGRAM PREPARES INDIVIDUALS IN SALES AND MARKETING. INSTRUCTION IN THE APPLICATION OF MARKETING SKILLS IN RETAIL ESTABLISHMENTS OR ANY INDUSTRY AND PREPARATION FOR ADVANCEMENT TO MORE SPECIALIZED TRAINING IN MARKETING IS INCLUDED. THE 'SPORTING GOODS SALES AND MANAGEMENT' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT FUNCTIONS AND TASKS IN ANY BUSINESS ENTERPRISE PRIMARILY ENGAGED IN SATISFYING THE DESIRE OF PEOPLE TO MAKE PRODUCTIVE OR ENJOYABLE USE OF LEISURE TIME. IT PREPARES INDIVIDUALS TO UNDERTAKE THE MARKETING ACTIVITIES INVOLVED IN SELLING OR RENTING A SPECIAL OR FULL LINE OF SUPPLIES AND EQUIPMENT, OTHER THAN VEHICLES, USED FOR RECREATIONAL OR SPORTING PURPOSES.

THE 'TRAVEL SERVICES MARKETING' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT FUNCTIONS AND TASKS IN ENTERPRISES ENGAGED IN TRAVEL SERVICE MARKETING TO FURNISH TRAVEL INFORMATION AND TO ACT AS AGENTS. INSTRUCTION IN ARRANGING TOURS AND TRANSPORTATION IS INCLUDED.

THE 'PARTS SALES AND SERVICE' PROGRAM PREPARES INDIVIDUALS TO PERFORM

MARKETING AND MANAGEMENT FUNCTIONS AND TASKS IN RETAIL OR WHOLESALE ESTABLISHMENTS ENGAGED IN THE DISTRIBUTION OF PARTS. IT PREPARES INDIVIDUALS TO ORDER, DISPENSE AND INVENTORY PARTS AND ACCESSORIES DEALING WITH THE AUTOMOTIVE, AGRICULTURAL AND RECREATIONAL VEHICLE INDUSTRIES. INSTRUCTION IN MERCHANDISING, DISPLAY WORK, BILLING, AND COMPUTER OPERATION AS WELL AS WARRANTIES, SHIPPING, AND WAREHOUSE PROCEDURES IS INCLUDED.

--- DEGREES OFFERED: A DIPLOMA OF COMPLETION AND A CERTIFICATE OF ATTENDANCE ARE OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAMS ARE 9-11 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$60-\$125 FOR BOOKS.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PRODUCT AND INSTITUTIONAL DISPLAY' PROGRAM PREPARES INDIVIDUALS TO ASSUME RESPONSIBILITIES ASSOCIATED WITH THE CREATION OF PRODUCT OR INSTITUTIONAL DISPLAYS AND EXHIBITS FOR THE PURPOSE OF STIMULATING SALES AND GOODWILL. INSTRUCTION IN PREPARING INDIVIDUALS TO PERFORM DISPLAY FUNCTIONS AS PART OF THE OPERATION OF ANY ENTERPRISE; VISUAL COMMUNICATION; INDUSTRIAL DISPLAY; DESIGN AND COORDINATION; RETAIL DISPLAY, DESIGN AND CONSTRUCTION; PROMOTION; AND ART FUNDAMENTALS IS INCLUDED.

THE 'FASHION MERCHANDISING' PROGRAM INCLUDES INSTRUCTION IN MANAGEMENT FUNCTIONS IN THE DISTRIBUTION OF APPAREL AND ACCESSORIES, FASHION MANAGEMENT, FASHION SELLING, FASHION BUYING, FASHION CYCLES, FASHION COORDINATION, AND SPECIALIZED CONSULTING SERVICES.

THE 'HARDWARE AND HOME CENTER MARKETING AND MANAGEMENT' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT ACTIVITIES PRIMARILY ASSOCIATED WITH RETAIL AND WHOLESALE HARDWARE AND HOME CENTER BUSINESSES. INSTRUCTION IN THE MARKETING OF A NUMBER OF BASIC LINES SUCH AS TOOLS, BUILDERS' HARDWARE, PAINT AND GLASS, WALL COVERINGS, BUILDING MATERIALS AND RELATED HARDWARE ITEMS IS INCLUDED.

THE 'TRAVEL SERVICES MARKETING' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT FUNCTIONS AND TASKS IN ENTERPRISES ENGAGED IN TRAVEL SERVICE MARKETING TO FURNISH TRAVEL INFORMATION AND TO ACT AS AGENTS. INSTRUCTION IN ARRANGING TOURS AND TRANSPORTATION IS INCLUDED.

THE 'PARTS SALES AND SERVICE' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT FUNCTIONS AND TASKS IN RETAIL OR WHOLESALE ESTABLISHMENTS ENGAGED IN THE DISTRIBUTION OF PARTS. IT PREPARES INDIVIDUALS TO ORDER, DISPENSE AND INVENTORY PARTS AND ACCESSORIES DEALING WITH THE AUTOMOTIVE, AGRICULTURAL AND RECREATIONAL VEHICLE INDUSTRIES. INSTRUCTION IN MERCHANDISING, DISPLAY WORK, BILLING, AND COMPUTER OPERATION AS WELL AS WARRANTIES, SHIPPING, AND WAREHOUSE PROCEDURES IS INCLUDED.

THE 'FINANCIAL SERVICES MARKETING, GENERAL' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING FUNCTIONS AND TASKS IN FINANCIAL INSTITUTIONS SUCH AS COMMERCIAL BANKS, SAVINGS AND LOAN ASSOCIATIONS, CREDIT AGENCIES, CREDIT UNIONS, CONSUMER-FINANCE COMPANIES, COLLECTION AGENCIES, SECURITY AND COMMODITY BROKERAGES, AND CREDIT DEPARTMENTS OF BUSINESS ENTERPRISES. INSTRUCTION INCLUDES THE PROMOTION AND TRANSACTION OF FINANCIAL SERVICES INCLUDING FINANCIAL COUNSELING.

THE 'SUPERMARKET MARKETING AND MANAGEMENT' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT FUNCTIONS IN RETAIL FOOD STORES. INSTRUCTION IN MANAGING DEPARTMENTS SUCH AS MEAT PACKING, DELI, FROZEN FOODS, PRODUCE, GROCERY AND GENERAL MERCHANDISING, PROMOTION AND ADVERTISING, DISPLAY AND JOB PRACTICES IS INCLUDED.

THE 'WAREHOUSE SERVICES' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT FUNCTIONS AND TASKS IN ENTERPRISES ENGAGED IN WAREHOUSE

SERVICES. INSTRUCTION IN THE MARKETING AND MANAGEMENT RESPONSIBILITIES ASSOCIATED WITH THE STORAGE OR WAREHOUSING OF PRODUCTS OF ANY KIND IS INCLUDED.

--- DEGREES OFFERED: CERTIFICATES OR DIPLOMAS AND DEGREES OF OCCUPATIONAL PROFICIENCY ARE OFFERED.

--- LENGTH OF PROGRAM: THE DISPLAY PROGRAM IS 11 OR 22 MONTHS LONG. FASHION MERCHANDISING PROGRAM IS 14 MONTHS. THE HARDWARE AND HOME CENTER MARKETING AND MANAGEMENT PROGRAM, THE FINANCIAL SERVICES MARKETING AND THE SUPERMARKET MARKETING AND MANAGEMENT PROGRAMS ARE 22 MONTHS LONG. THE TRAVEL SERVICES AND WAREHOUSE SERVICES PROGRAMS ARE 7 1/2 MONTHS LONG. THE PARTS SALES AND SERVICE PROGRAM IS 11 MONTHS.

- - - - - 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FASHION MERCHANDISING' PROGRAM INCLUDES INSTRUCTION IN MANAGEMENT FUNCTIONS IN THE DISTRIBUTION OF APPAREL AND ACCESSORIES, FASHION MANAGEMENT, FASHION SELLING, FASHION BUYING, FASHION CYCLES, FASHION COORDINATION, AND SPECIALIZED CONSULTING SERVICES. THE 'PROFESSIONAL AND INDUSTRIAL SALES' PROGRAM PREPARES INDIVIDUALS TO SERVE AS AGENTS OR SALES REPRESENTATIVE FOR MANUFACTURERS AND TO SELL A SPECIAL LINE OF PRODUCTS TO OTHER BUSINESSES, FACTORIES, PROFESSIONAL WORKERS, AND PUBLIC AND PRIVATE INSTITUTIONS. INSTRUCTION IN SALES ADVERTISING, COMMUNICATIONS, TIME AND TERRITORY MANAGEMENT, SALES MANAGEMENT, AND MARKETING IS INCLUDED.

--- DEGREES OFFERED: STUDENTS IN FASHION MERCHANDISING WHO WISH TO COMPLETE ONLY THE FIRST 10 1/2 MONTHS OF THE PROGRAM WILL RECEIVE A SALES DIPLOMA. OTHERS RECEIVE A FASHION DIPLOMA. A DIPLOMA IS OFFERED IN PROFESSIONAL AND INDUSTRIAL SALES.

--- LENGTH OF PROGRAM: THE FASHION MERCHANDISING PROGRAM IS 12 MONTHS LONG. THE PROFESSIONAL AND INDUSTRIAL SALES PROGRAM IS 10 1/2 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$165 FOR BOOKS, AND \$125 FOR FIELD TRIPS FOR THE FASHION PROGRAM AND \$120 FOR BOOKS AND \$125 FOR FIELD TRIPS FOR THE SALES PROGRAM.

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FASHION MERCHANDISING' PROGRAM INCLUDES INSTRUCTION IN MANAGEMENT FUNCTIONS IN THE DISTRIBUTION OF APPAREL AND ACCESSORIES, FASHION MANAGEMENT, FASHION SELLING, FASHION BUYING, FASHION CYCLES, FASHION COORDINATION, AND SPECIALIZED CONSULTING SERVICES. THE 'MARKETING MANAGEMENT' PROGRAM DESCRIBES THE PRINCIPLES, PRACTICES, AND CONCEPTS INVOLVED IN THE PERFORMANCE OF BUSINESS ACTIVITIES WHICH DIRECT THE TRANSFER OF GOODS AND THE ACQUISITION OF SERVICES FROM PRODUCER TO CONSUMER. THIS PROGRAM PREPARES INDIVIDUALS TO APPLY MARKETING SKILLS IN A MANAGEMENT POSITION IN ANY INDUSTRY, GENERALLY AT A MID-MANAGEMENT LEVEL OR IN A MANAGEMENT-TRAINING PROGRAM. INSTRUCTION INCLUDES MARKETING FUNCTIONS AND INSTITUTIONS; ACTIVITIES HAVING TO DO WITH EFFECTING CHANGE IN OWNERSHIP AND POSSESSION OF GOODS AND SERVICES; AND THE STUDY OF APPLIED ECONOMICS RELATING TO THE CREATION OF TIME, PLACE, AND POSSESSION UTILITY.

--- DEGREES OFFERED: A CERTIFICATE OR DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: THE FASHION MERCHANDISING PROGRAM AND THE MARKETING AND MANAGEMENT PROGRAM ARE UP TO 76 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$250 FOR THE FASHION MERCHANDISING PROGRAM AND \$150 FOR THE MARKETING AND MANAGEMENT PROGRAM.

- - - - - 25012 FARIBAUT AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MARKETING MANAGEMENT' PROGRAM DESCRIBES THE PRINCIPLES, PRACTICES, AND CONCEPTS INVOLVED IN THE PERFORMANCE OF BUSINESS ACTIVITIES WHICH DIRECT THE TRANSFER OF GOODS AND THE ACQUISITION OF SERVICES FROM PRODUCER TO CONSUMER. THIS PROGRAM PREPARES INDIVIDUALS TO APPLY MARKETING SKILLS IN A MANAGEMENT POSITION IN ANY INDUSTRY, GENERALLY AT A MID-MANAGEMENT LEVEL OR IN A MANAGEMENT-TRAINING PROGRAM. INSTRUCTION INCLUDES MARKETING FUNCTIONS AND INSTITUTIONS; ACTIVITIES HAVING TO DO WITH EFFECTING CHANGE IN OWNERSHIP AND POSSESSION OF GOODS AND SERVICES; AND THE STUDY OF APPLIED ECONOMICS RELATING TO THE CREATION OF TIME, PLACE, AND POSSESSION UTILITY.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE MARKETING MANAGEMENT PROGRAM IS 9 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$250 FOR BOOKS AND SUPPLIES.

- - - - - 25013 GRANITE FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PROFESSIONAL AND INDUSTRIAL SALES' PROGRAM PREPARES INDIVIDUALS TO SERVE AS AGENTS OR SALES REPRESENTATIVES FOR MANUFACTURERS AND TO SELL A SPECIAL LINE OF PRODUCTS TO OTHER BUSINESSES, FACTORIES, PROFESSIONAL WORKERS, AND PUBLIC AND PRIVATE INSTITUTIONS. INSTRUCTION IN SALES, ADVERTISING, COMMUNICATIONS, TIME AND TERRITORY MANAGEMENT, SALES MANAGEMENT, AND MARKETING IS INCLUDED.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION AND A DIPLOMA ARE OFFERED.

--- LENGTH OF PROGRAM: THE PROFESSIONAL AND INDUSTRIAL SALES PROGRAM IS 9 MONTHS LONG WHICH INCLUDES A ONE MONTH INTERNSHIP ON-THE-JOB TRAINING EXPERIENCE.

- - - - - 25014 HIBBING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MARKETING MANAGEMENT' PROGRAM DESCRIBES THE PRINCIPLES, PRACTICES, AND CONCEPTS INVOLVED IN THE PERFORMANCE OF BUSINESS ACTIVITIES WHICH DIRECT THE TRANSFER OF GOODS AND THE ACQUISITION OF SERVICES FROM PRODUCER TO CONSUMER. THIS PROGRAM PREPARES INDIVIDUALS TO APPLY MARKETING SKILLS IN A MANAGEMENT POSITION IN ANY INDUSTRY, GENERALLY AT A MID-MANAGEMENT LEVEL OR IN A MANAGEMENT-TRAINING PROGRAM. INSTRUCTION INCLUDES MARKETING FUNCTIONS AND INSTITUTIONS; ACTIVITIES HAVING TO DO WITH EFFECTING CHANGE IN OWNERSHIP AND POSSESSION OF GOODS AND SERVICES; AND THE STUDY OF APPLIED ECONOMICS RELATING TO THE CREATION OF TIME, PLACE, AND POSSESSION UTILITY.

THE 'MICROCOMPUTER SALES, SERVICE AND REPAIR' IS A NEW OR REVISED PROGRAM FOR WHICH THERE WAS NO AVAILABLE DESCRIPTION AT THE UPDATE OF THIS EDITION OF MCIS. PLEASE CONTACT THE AVTI FOR INFORMATION ON THIS PROGRAM.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE MARKETING MANAGEMENT PROGRAM IS 20 MONTHS LONG. THIS INCLUDES A 2-MONTH SUMMER INTERNSHIP.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$55 PER YEAR FOR BOOKS, SUPPLIES, EQUIPMENT AND OTHER COSTS FOR MARKETING MANAGEMENT.

- - - - - 25015 HUTCHINSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MARKETING MANAGEMENT' PROGRAM DESCRIBES THE PRINCIPLES, PRACTICES, AND CONCEPTS INVOLVED IN THE PERFORMANCE OF BUSINESS ACTIVITIES WHICH DIRECT THE TRANSFER OF GOODS AND THE ACQUISITION OF SERVICES FROM PRODUCER TO CONSUMER. THIS PROGRAM PREPARES INDIVIDUALS TO APPLY MARKETING SKILLS IN A MANAGEMENT POSITION IN ANY INDUSTRY,

GENERALLY AT A MID-MANAGEMENT LEVEL OR IN A MANAGEMENT-TRAINING PROGRAM. INSTRUCTION INCLUDES MARKETING FUNCTIONS AND INSTITUTIONS; ACTIVITIES HAVING TO DO WITH EFFECTING CHANGE IN OWNERSHIP AND POSSESSION OF GOODS AND SERVICES; AND THE STUDY OF APPLIED ECONOMICS RELATING TO THE CREATION OF TIME, PLACE, AND POSSESSION UTILITY.

--- DEGREES OFFERED: STUDENTS WHO MEET ALL OF THE CORE REQUIREMENTS (COMPETENCIES) WILL RECEIVE A DEGREE.

--- LENGTH OF PROGRAM: THE MARKETING MANAGEMENT PROGRAM IS 80-88 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR THE FIRST YEAR WILL INCLUDE \$170 FOR SUPPLIES, BOOKS AND PROGRAM FEES. FOR THE SECOND YEAR, THE COSTS ARE \$170.

- - - - - 25016 JACKSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MARKETING MANAGEMENT' PROGRAM DESCRIBES THE PRINCIPLES, PRACTICES, AND CONCEPTS INVOLVED IN THE PERFORMANCE OF BUSINESS ACTIVITIES WHICH DIRECT THE TRANSFER OF GOODS AND THE ACQUISITION OF SERVICES FROM PRODUCER TO CONSUMER. THIS PROGRAM PREPARES INDIVIDUALS TO APPLY MARKETING SKILLS IN A MANAGEMENT POSITION IN ANY INDUSTRY, GENERALLY AT A MID-MANAGEMENT LEVEL OR IN A MANAGEMENT-TRAINING PROGRAM. INSTRUCTION INCLUDES MARKETING FUNCTIONS AND INSTITUTIONS; ACTIVITIES HAVING TO DO WITH EFFECTING CHANGE IN OWNERSHIP AND POSSESSION OF GOODS AND SERVICES; AND THE STUDY OF APPLIED ECONOMICS RELATING TO THE CREATION OF TIME, PLACE, AND POSSESSION UTILITY.

--- DEGREES OFFERED: A TECHNICAL SCHOOL DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 17 MONTHS LONG. STUDENTS ATTEND REGULAR CLASS 4 HOURS PER DAY AND ARE ON THE JOB TRAINING FOR 2 HOURS EACH DAY.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$250 FOR BOOKS AND SUPPLIES EACH YEAR.

- - - - - 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MARKETING MANAGEMENT' PROGRAM DESCRIBES THE PRINCIPLES, PRACTICES, AND CONCEPTS INVOLVED IN THE PERFORMANCE OF BUSINESS ACTIVITIES WHICH DIRECT THE TRANSFER OF GOODS AND THE ACQUISITION OF SERVICES FROM PRODUCER TO CONSUMER. THIS PROGRAM PREPARES INDIVIDUALS TO APPLY MARKETING SKILLS IN A MANAGEMENT POSITION IN ANY INDUSTRY, GENERALLY AT A MID-MANAGEMENT LEVEL OR IN A MANAGEMENT-TRAINING PROGRAM. INSTRUCTION INCLUDES MARKETING FUNCTIONS AND INSTITUTIONS; ACTIVITIES HAVING TO DO WITH EFFECTING CHANGE IN OWNERSHIP AND POSSESSION OF GOODS AND SERVICES; AND THE STUDY OF APPLIED ECONOMICS RELATING TO THE CREATION OF TIME, PLACE, AND POSSESSION UTILITY.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS AWARDED.

--- LENGTH OF PROGRAM: THIS IS A 78 WEEK PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS ARE \$250.

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GENERAL MERCHANDISING/RETAIL SALES' PROGRAM PREPARES INDIVIDUALS IN SALES AND MARKETING. INSTRUCTION IN THE APPLICATION OF MARKETING SKILLS IN RETAIL ESTABLISHMENTS OR ANY INDUSTRY AND PREPARATION FOR ADVANCEMENT TO MORE SPECIALIZED TRAINING IN MARKETING IS INCLUDED.

THE 'PROFESSIONAL AND INDUSTRIAL SALES' PROGRAM PREPARES INDIVIDUALS TO SERVE AS AGENTS OR SALES REPRESENTATIVE FOR MANUFACTURERS AND TO SELL A SPECIAL LINE OF PRODUCTS TO OTHER BUSINESS, FACTORIES, PROFESSIONAL

WORKERS, AND PUBLIC AND PRIVATE INSTITUTIONS. INSTRUCTION IN SALES ADVERTISING, COMMUNICATIONS, TIME AND TERRITORY MANAGEMENT, SALES MANAGEMENT, AND MARKETING IS INCLUDED.

THE 'PARTS SALES AND SERVICE' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT FUNCTIONS AND TASKS IN RETAIL OR WHOLESALE ESTABLISHMENTS ENGAGED IN THE DISTRIBUTION OF PARTS. IT PREPARES INDIVIDUALS TO ORDER, DISPENSE AND INVENTORY PARTS AND ACCESSORIES DEALING WITH THE AUTOMOTIVE, AGRICULTURAL AND RECREATIONAL VEHICLE INDUSTRIES. INSTRUCTION IN MERCHANDISING, DISPLAY WORK, BILLING AND COMPUTER OPERATION AS WELL AS WARRANTIES, SHIPPING, AND WAREHOUSE PROCEDURES IS INCLUDED.

THE 'SPORTING GOODS SALES AND MANAGEMENT' PROGRAM PREPARES INDIVIDUALS TO UNDERTAKE THE MARKETING ACTIVITIES INVOLVED IN SELLING OR RENTING A SPECIAL OR FULL LINE OF SUPPLIES AND EQUIPMENT, OTHER THAN VEHICLES, USED FOR RECREATIONAL OR SPORTING PURPOSES.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THESE ARE 9 - 12 MONTHS PROGRAMS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$110 FOR GENERAL MERCHANDISING/RETAIL SALES, \$85 FOR SPORTING GOODS SALES FOR BOOKS, \$4 FOR PARTS SALES FOR SAFETY GLASSES AND \$50 FOR PROFESSIONAL AND INDUSTRIAL SALES FOR BOOKS.

- - - - - 25019 MOORHEAD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FASHION MERCHANDISING' PROGRAM INCLUDES INSTRUCTION IN MANAGEMENT FUNCTIONS IN THE DISTRIBUTION OF APPAREL AND ACCESSORIES, FASHION MANAGEMENT, FASHION SELLING, FASHION BUYING, FASHION CYCLES, FASHION COORDINATION, AND SPECIALIZED CONSULTING SERVICES.

THE 'SUPERMARKET MARKETING AND MANAGEMENT' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT FUNCTIONS IN RETAIL FOOD STORES. INSTRUCTION IN MANAGING DEPARTMENTS SUCH AS MEAT PACKING, DELI, FROZEN FOODS, PRODUCE, GROCERY AND GENERAL MERCHANDISING, PROMOTION AND ADVERTISING, DISPLAY AND JOB PRACTICES IS INCLUDED.

THE 'GENERAL MERCHANDISING/RETAIL SALES' PROGRAM PREPARES INDIVIDUALS IN SALES AND MARKETING. INSTRUCTION IN THE APPLICATION OF MARKETING SKILLS IN RETAIL ESTABLISHMENTS OR ANY INDUSTRY AND PREPARATION FOR ADVANCEMENT TO MORE SPECIALIZED TRAINING IN MARKETING IS INCLUDED.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE 20 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE \$200 FOR FASHION MERCHANDISING.

- - - - - 25020 PINE TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MATERIALS AND INVENTORY MANAGEMENT' PROGRAM PREPARES INDIVIDUALS TO PERFORM TASKS INVOLVING INVENTORY CONTROL AND MATERIALS MANAGEMENT FOR MANUFACTURING, INDUSTRIAL, OR INSTITUTIONAL ENTERPRISES. INSTRUCTION INCLUDES PRODUCTION PLANNING, INVENTORY CONTROL, TRAFFIC MANAGEMENT, MATERIALS DISTRIBUTION, RECORDS MANAGEMENT AND PRINCIPLES OF MANAGEMENT.

--- DEGREES OFFERED: GRADUATES OF THIS PROGRAM RECEIVE A DEGREE OF OCCUPATIONAL PROFICIENCY OR CERTIFICATE OF COMPLETION.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES 9 MONTHS TO COMPLETE.

- - - - - 25021 PIPESTONE AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FASHION MERCHANDISING' PROGRAM INCLUDES INSTRUCTION IN MANAGEMENT FUNCTIONS IN THE DISTRIBUTION OF APPAREL AND ACCESSORIES, FASHION MANAGEMENT, FASHION SELLING, FASHION BUYING, FASHION

CYCLES, FASHION COORDINATION, AND SPECIALIZED CONSULTING SERVICES.
 THE 'SUPERMARKET MARKETING AND MANAGEMENT' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT FUNCTIONS IN RETAIL FOOD STORES. INSTRUCTION IN MANAGING DEPARTMENTS SUCH AS MEAT PACKING, DELI, FROZEN FOODS, PRODUCE, GROCERY AND GENERAL MERCHANDISING, PROMOTION AND ADVERTISING, DISPLAY AND JOB PRACTICES IS INCLUDED.
 THE 'BUILDING MATERIALS MARKETING AND MANAGEMENT' PROGRAM INCLUDES INSTRUCTION IN THE MARKETING OF LUMBER AND A GENERAL LINE OF BUILDING MATERIALS SUCH AS MILLWORK, ROOFING, WALLBOARD, BRICKS, AND CEMENT, HEATING AND AIR CONDITIONING EQUIPMENT, OR ELECTRICAL PRODUCTS AND SUPPLIES
 --- DEGREES OFFERED: STUDENTS WHO COMPLETE THESE PROGRAMS ARE AWARDED DEGREES OF OCCUPATIONAL PROFICIENCY.
 --- LENGTH OF PROGRAM: SUPERMARKET MARKETING AND MANAGEMENT AND FASHION MERCHANDISING AND MANAGEMENT ARE 11 OR 22 MONTH PROGRAMS. THE BUILDING MATERIALS MARKETING PROGRAM IS 11 MONTHS LONG.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE
 --- OBJECTIVES OF THE PROGRAM: THE 'PARTS SALES AND SERVICE' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT FUNCTIONS AND TASKS IN RETAIL OR WHOLESALE ESTABLISHMENTS ENGAGED IN THE DISTRIBUTION OF PARTS. IT PREPARES INDIVIDUALS TO ORDER, DISPENSE AND INVENTORY PARTS AND ACCESSORIES DEALING WITH THE AUTOMOTIVE, AGRICULTURAL AND RECREATIONAL VEHICLE INDUSTRIES. INSTRUCTION IN MERCHANDISING, DISPLAY WORK, BILLING, AND COMPUTER OPERATION AS WELL AS WARRANTIES, SHIPPING, AND WAREHOUSE PROCEDURES IS INCLUDED.
 THE 'FASHION MERCHANDISING' PROGRAM INCLUDES INSTRUCTION IN MANAGEMENT FUNCTIONS IN THE DISTRIBUTION OF APPAREL AND ACCESSORIES, FASHION MANAGEMENT, FASHION SELLING, FASHION BUYING, FASHION CYCLES, FASHION COORDINATION, AND SPECIALIZED CONSULTING SERVICES.
 THE 'HOME FURNISHINGS SALES AND MERCHANDISING' PROGRAM PREPARES INDIVIDUALS TO UNDERTAKE THE RESPONSIBILITIES ASSOCIATED WITH THE SELLING AND MARKETING OF HOME FURNISHINGS. INSTRUCTION IN SALES AND MERCHANDISING OF FURNITURE AND RELATED ACCESSORIES, AND SPECIALIZED CONSULTING SERVICES IS INCLUDED.
 --- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.
 --- LENGTH OF PROGRAM: FASHION AND HOME FURNISHINGS ARE 19-MONTH PROGRAMS. PARTS SALES AND SERVICE IS 10 MONTHS LONG.
 --- SPECIAL COSTS: PROGRAM RELATED COSTS FOR EACH OF THESE PROGRAMS WILL INCLUDE \$92 FOR BOOKS, SUPPLIES AND EQUIPMENT.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE
 --- OBJECTIVES OF THE PROGRAM: THE 'MATERIALS AND INVENTORY MANAGEMENT' PROGRAM PREPARES INDIVIDUALS TO PERFORM TASKS INVOLVING INVENTORY CONTROL AND MATERIALS MANAGEMENT FOR MANUFACTURING, INDUSTRIAL, OR INSTITUTIONAL ENTERPRISES. INSTRUCTION INCLUDES PRODUCTION PLANNING, INVENTORY CONTROL, TRAFFIC MANAGEMENT, MATERIALS DISTRIBUTION, RECORDS MANAGEMENT AND PRINCIPLES OF MANAGEMENT.
 THE 'FINANCIAL SERVICES MARKETING, GENERAL' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING FUNCTIONS AND TASKS IN FINANCIAL INSTITUTIONS SUCH AS COMMERCIAL BANKS, SAVINGS AND LOAN ASSOCIATIONS, CREDIT AGENCIES, CREDIT UNIONS, CONSUMER-FINANCE COMPANIES, COLLECTION AGENCIES, SECURITY AND COMMODITY BROKERAGES, AND CREDIT DEPARTMENTS OF BUSINESS ENTERPRISES. INSTRUCTION INCLUDES THE PROMOTION AND TRANSACTION OF FINANCIAL SERVICES INCLUDING FINANCIAL COUNSELING.
 THE 'GENERAL MERCHANDISING/RETAIL SALES' PROGRAM PREPARES INDIVIDUALS IN

SALES AND MARKETING. INSTRUCTION IN THE APPLICATION OF MARKETING SKILLS IN RETAIL ESTABLISHMENTS OR ANY INDUSTRY AND PREPARATION FOR ADVANCEMENT TO MORE SPECIALIZED TRAINING IN MARKETING IS INCLUDED.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED IN THESE PROGRAMS.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE 9-18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDES BOOKS AND SUPPLIES.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'GENERAL MERCHANDISING/RETAIL SALES' PROGRAM PREPARES INDIVIDUALS IN SALES AND MARKETING. INSTRUCTION IN THE APPLICATION OF MARKETING SKILLS IN RETAIL ESTABLISHMENTS OR ANY INDUSTRY AND PREPARATION FOR ADVANCEMENT TO MORE SPECIALIZED TRAINING IN MARKETING IS INCLUDED.

THE 'PARTS SALES AND SERVICE' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT FUNCTIONS AND TASKS IN RETAIL OR WHOLESALE ESTABLISHMENTS ENGAGED IN THE DISTRIBUTION OF PARTS. IT PREPARES INDIVIDUALS TO ORDER, DISPENSE AND INVENTORY PARTS AND ACCESSORIES DEALING WITH THE AUTOMOTIVE, AGRICULTURAL AND RECREATIONAL VEHICLE INDUSTRIES. INSTRUCTION IN MERCHANDISING, DISPLAY WORK, BILLING, AND COMPUTER OPERATION AS WELL AS WARRANTIES, SHIPPING, AND WAREHOUSE PROCEDURES IS INCLUDED.

--- DEGREES OFFERED: A DIPLOMA OF RECOGNITION IS OFFERED.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE FROM 9 TO 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$75 TO \$85 FOR BOOKS AND SUPPLIES.

- - - - - 25028 THIEF RIVER FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GENERAL MERCHANDISING/RETAIL SALES' PROGRAM PREPARES INDIVIDUALS IN SALES AND MARKETING. INSTRUCTION IN THE APPLICATION OF MARKETING SKILLS IN RETAIL ESTABLISHMENTS OR ANY INDUSTRY AND PREPARATION FOR ADVANCEMENT TO MORE SPECIALIZED TRAINING IN MARKETING IS INCLUDED.

--- DEGREES OFFERED: DEGREES OF OCCUPATIONAL PROFICIENCY ARE AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES 10 MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS, SUPPLIES, EQUIPMENT.

- - - - - 25029 WADENA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PARTS SALES AND SERVICES' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT FUNCTIONS AND TASKS IN RETAIL OR WHOLESALE ESTABLISHMENTS ENGAGED IN THE DISTRIBUTION OF PARTS. IT PREPARES INDIVIDUALS TO ORDER, DISPENSE AND INVENTORY PARTS AND ACCESSORIES DEALING WITH THE AUTOMOTIVE, AGRICULTURAL AND RECREATIONAL VEHICLE INDUSTRIES. INSTRUCTION IN MERCHANDISING, DISPLAY WORK, BILLING AND COMPUTER OPERATION AS WELL AS WARRANTIES, SHIPPING, AND WAREHOUSE PROCEDURES IS INCLUDED.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES 9 MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$20 FOR BOOKS AND SUPPLIES.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MARKETING MANAGEMENT' PROGRAM DESCRIBES THE PRINCIPLES, PRACTICES, AND CONCEPTS INVOLVED IN THE PERFORMANCE OF BUSINESS ACTIVITIES WHICH DIRECT THE TRANSFER OF GOODS AND THE ACQUISITION

OF SERVICES FROM PRODUCER TO CONSUMER. THIS PROGRAM PREPARES INDIVIDUALS TO APPLY MARKETING SKILLS IN A MANAGEMENT POSITION IN ANY INDUSTRY, GENERALLY AT A MID-MANAGEMENT LEVEL OR IN A MANAGEMENT-TRAINING PROGRAM. INSTRUCTION INCLUDES MARKETING FUNCTIONS AND INSTITUTIONS; ACTIVITIES HAVING TO DO WITH EFFECTING CHANGE IN OWNERSHIP AND POSSESSION OF GOODS AND SERVICES; AND THE STUDY OF APPLIED ECONOMICS RELATING TO THE CREATION OF TIME, PLACE, AND POSSESSION UTILITY.

THE 'PARTS SALES AND SERVICE' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT FUNCTIONS AND TASKS IN RETAIL OR WHOLESALE ESTABLISHMENTS ENGAGED IN THE DISTRIBUTION OF PARTS. IT PREPARES INDIVIDUALS TO ORDER, DISPENSE AND INVENTORY PARTS AND ACCESSORIES DEALING WITH THE AUTOMOTIVE, AGRICULTURAL AND RECREATIONAL VEHICLE INDUSTRIES. INSTRUCTION IN MERCHANDISING, DISPLAY WORK, BILLING, AND COMPUTER OPERATION AS WELL AS WARRANTIES, SHIPPING, AND WAREHOUSE PROCEDURES IS INCLUDED.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OR A CERTIFICATE IS AWARDED.

--- LENGTH OF PROGRAM: THE MARKETING MANAGEMENT PROGRAM TAKES 21 MONTHS. THE PARTS PROGRAM IS 10 MONTHS LONG.

--- SPECIAL COSTS: BOOKS (ALL USEABLE BOOKS ARE BOUGHT BACK AT 70 PERCENT OF PAID PRICE) AND SUPPLIES FOR MARKETING/MANAGEMENT WILL COST ABOUT \$225, FOR PARTS WILL COST ABOUT \$105.

- - - - - 25031 WINONA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GENERAL MERCHANDISING/RETAIL SALES' PROGRAM PREPARES INDIVIDUALS IN SALES AND MARKETING. INSTRUCTION IN THE APPLICATION OF MARKETING SKILLS IN RETAIL ESTABLISHMENTS OR ANY INDUSTRY AND PREPARATION FOR ADVANCEMENT TO MORE SPECIALIZED TRAINING IN MARKETING IS INCLUDED.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THIS IS A 9 MONTH PROGRAM.

--- SPECIAL COSTS: BOOKS AND SUPPLIES FOR THIS PROGRAM WILL COST ABOUT \$50.

- - - - - 25032 EAST GRAND FORKS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PARTS SALES AND SERVICE' PROGRAM PREPARES INDIVIDUALS TO ORDER, DISPENSE AND INVENTORY PARTS AND ACCESSORIES DEALING WITH THE AUTOMOTIVE, AGRICULTURAL AND RECREATIONAL VEHICLE INDUSTRIES. INSTRUCTION IN MERCHANDISING, DISPLAY WORK, BILLING AND COMPUTER OPERATION AS WELL AS WARRANTIES, SHIPPING, AND WAREHOUSE PROCEDURES IS INCLUDED.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE PARTS SALES AND SERVICE TRAINING PROGRAM IS 10 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$197 FOR BOOKS, SUPPLIES AND EQUIPMENT FOR PARTS SALES AND SERVICE TRAINING.

- - - - - 26072 MOORHEAD STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: A BACHELOR OF SCIENCE MAJOR IN 'MARKETING' CONSISTS OF 74 CREDITS AND IS CONCERNED WITH THE FLOW OF GOODS AND SERVICES THROUGH THE ECONOMY. IT INCLUDES THE DISTRIBUTION OF BOTH INDUSTRIAL AND CONSUMER GOODS. COMMON COURSES INCLUDE: RETAILING, ADVERTISING, MARKET RESEARCH, ACCOUNTING, BUSINESS MATH, BUSINESS LAW, ECONOMICS, SALES, CREDIT, DISPLAY, COMMUNICATIONS. AN ASSOCIATE IN SCIENCE IN MARKETING IS ALSO OFFERED.

--- DEGREES OFFERED: ASSOCIATE OF SCIENCE AND BACHELOR OF SCIENCE DEGREES ARE OFFERED.

--- LENGTH OF PROGRAM: ONE TO FOUR YEARS.

- - - - - 26175 SOUTHWEST STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE ASSOCIATE OF SCIENCE DEGREE IN 'MARKETING' CONSISTS OF 58-59 CREDITS, 47-48 OF WHICH ARE IN THE MARKETING AND BUSINESS ADMINISTRATION CORE, 11 OF WHICH ARE RESTRICTED ELECTIVES TO BE TAKEN IN AREAS OF SPECIAL INTEREST AND USE TO THE STUDENT. THE PROGRAM IS DESIGNED TO GIVE STUDENTS A BASIC BACKGROUND IN MARKETING.

A MAJOR IN 'MARKETING' CONSISTS OF 81-82 CREDITS AND IS CONCERNED WITH THE FLOW OF GOODS AND SERVICES THROUGH THE ECONOMY. IT INCLUDES DISTRIBUTION OF BOTH INDUSTRIAL AND CONSUMER GOODS. IN ADDITION TO THE BUSINESS CORE, COURSES ARE OFFERED IN RETAILING, ADVERTISING, MARKET RESEARCH, MARKETING MANAGEMENT, AND RELATED SPECIALTIES.

--- DEGREES OFFERED: AN ASSOCIATE OF SCIENCE AND A BACHELOR OF SCIENCE DEGREE ARE OFFERED IN MARKETING.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE ONE TO FOUR YEARS LONG.

- - - - - 27139 AUSTIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: A 'MARKETING MANAGEMENT' PROGRAM IS OFFERED. IT PREPARES STUDENTS FOR POSITIONS IN SALES, MERCHANDISING, WHOLESALING, RETAILING, ADVERTISING, AND SERVICE OCCUPATIONS. THIS IS A COMBINED PROGRAM WITH THE AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE. STUDENTS APPLY DIRECTLY TO THE AVTI.

--- DEGREES OFFERED: MARKETING MANAGEMENT OFFERS A CERTIFICATE PROGRAM AND AN ASSOCIATE IN APPLIED SCIENCE PROGRAM.

--- LENGTH OF PROGRAM: THE MARKETING MANAGEMENT CERTIFICATE PROGRAM IS ONE YEAR LONG. THE MARKETING MANAGEMENT DEGREE PROGRAM IS 6 QUARTERS IN LENGTH.

- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS MARKETING AND SALES' PROGRAM IS A VOCATIONAL PROGRAM AND PREPARES STUDENTS TO TAKE ADVANTAGE OF THE NUMEROUS OPPORTUNITIES IN SALES, MARKETING, MERCHANDISING, ADVERTISING, AND FINANCES. THE MARKETING CURRICULUM IS ALSO INTENDED FOR THOSE WHO PLAN TO OPERATE THEIR OWN BUSINESS.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE BUSINESS MARKETING AND SALES PROGRAM IS A 2 YEAR PROGRAM.

- - - - - 27144 ITASCA COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'MARKETING MANAGEMENT PROGRAM' IS DESIGNED TO DEVELOP BASIC KNOWLEDGE AND COMPETENCIES IN THE FIELD OF MARKETING AND MID-MANAGEMENT FOR STUDENTS PREPARING TO ENTER THE FIELD OF BUSINESS AND TO UPGRADE THE MARKETING SKILLS OF BUSINESS EMPLOYEES CURRENTLY EMPLOYED. THE PROGRAM IS APPLICABLE TO RETAIL, WHOLESALE AND MANUFACTURING PERSONNEL

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS TWO YEARS LONG.

- - - - - 27148 ROCHESTER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'MARKETING' PROGRAM IS DESIGNED FOR THOSE STUDENTS WHO INTEND TO ENTER THE FIELDS OF SALES, ADVERTISING, FASHIONS, RETAILING, AND RELATED WORK. STUDENTS CAN CONCENTRATE IN AN AREA

OF MARKETING INTEREST BY CHOOSING ELECTIVES WITHIN AND OUTSIDE OF THE BUSINESS DIVISION SUCH AS FASHION, ART, SPEECH, AND CHEMISTRY.

--- DEGREES OFFERED: A COMMUNITY COLLEGE VOCATIONAL CERTIFICATE AND AN ASSOCIATE IN APPLIED SCIENCE DEGREE ARE OFFERED.

--- LENGTH OF PROGRAM: THE MARKETING PROGRAM IS 1 OR 2 YEARS LONG.

- - - - - 27150 MESABI COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'MARKETING AND MANAGEMENT' CURRICULUM PREPARES STUDENTS FOR CAREERS IN SALES, PURCHASING, MANAGEMENT, AND OTHER RELATED OCCUPATIONS. THE PROGRAM TEACHES STUDENTS ABOUT THE DISTRIBUTION OF GOODS AND SERVICES THROUGH CLASSES AND AN INTERNSHIP. COURSES INCLUDE BUSINESS COMMUNICATIONS, MARKETING, SELLING, CREDIT, DATA PROCESSING, BUSINESS MATH, BUSINESS LAW, AND MANAGEMENT.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'MARKETING MANAGEMENT' PROGRAM TRAINS PEOPLE FOR MARKETING AND SALES POSITIONS IN BUSINESS AND INDUSTRY. STUDENTS COMPLETE CORE REQUIREMENTS IN CREDIT, ACCOUNTING, RETAILING, ADVERTISING, MARKETING, MANAGEMENT, BUSINESS LAW, MATH, CORRESPONDENCE, AND DATA PROCESSING. THEY ALSO CHOOSE ELECTIVES IN BUSINESS AND COMPLETE THE REQUIRED GENERAL EDUCATION COURSES. THEY MAY CHOOSE TO TAKE ON-THE-JOB INTERNSHIPS FOR CREDIT.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: STUDENTS WHO ARE INTERESTED IN A CAREER IN MARKETING MAY CHOOSE A 'MARKETING CERTIFICATE' PROGRAM, A 'MARKETING AND SALES' OPTION, OR A 'RETAILING' OPTION. COMMON REQUIREMENTS FOR EACH OF THESE PROGRAMS INCLUDE ENGLISH, BUSINESS, MARKETING, RETAILING, BUSINESS LAW AND MATH, ACCOUNTING, CREDIT AND COLLECTIONS, AND PSYCHOLOGY.

--- DEGREES OFFERED: THE MARKETING CERTIFICATE PROGRAM OFFERS A CERTIFICATE IN MARKETING. THE MARKETING AND SALES AND THE RETAILING PROGRAMS OFFER ASSOCIATE OF APPLIED SCIENCE DEGREES.

--- LENGTH OF PROGRAM: THE CERTIFICATION PROGRAM IS 4 QUARTERS (1 1/3 YEARS) LONG. THE DEGREE PROGRAMS ARE 2 YEARS LONG.

- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'MARKETING' PROGRAM PREPARES STUDENTS FOR OCCUPATIONS IN FIRMS ENGAGED IN THE MARKETING AND DISTRIBUTION OF GOODS AND SERVICES. STUDENTS TAKE COURSES IN ACCOUNTING, ECONOMICS, ADVERTISING, BUSINESS COMMUNICATION AND LAW, MARKETING, SALES, AND RELATED BUSINESS AREAS. THEY ALSO COMPLETE GENERAL EDUCATION COURSES.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE A.A.S. DEGREE REQUIRES 90 QUARTER CREDITS, 52 OF WHICH ARE REQUIRED IN THE MARKETING PROGRAM.

- - - - - 27156 NORMANDALE COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'MARKETING' PROGRAM PREPARES STUDENTS FOR CAREERS IN SALES, MERCHANDISING, AND ADVERTISING. THE PROGRAM IS ALSO INTENDED FOR THOSE WHO PLAN TO OPERATE THEIR OWN BUSINESSES. STUDENTS COMPLETE COURSES IN A WIDE VARIETY OF BUSINESS AREAS. STUDENTS IN A DEGREE PROGRAM TAKE SPECIALIZED BUSINESS COURSES AS WELL AS GENERAL EDUCATION COURSES.

--- DEGREES OFFERED: STUDENTS MAY EARN A CERTIFICATE OR AN ASSOCIATE IN APPLIED SCIENCE DEGREE.
--- LENGTH OF PROGRAM: STUDENTS MAY CHOOSE EITHER A 1 OR 2 YEAR MARKETING PROGRAM.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'MARKETING AND SALES CERTIFICATE' PROGRAM PROVIDES A CONCENTRATED MARKETING CURRICULUM FOR THOSE INTERESTED IN ENTERING TRAINEE POSITIONS IN BUSINESS OR INDUSTRY. THE 'MARKETING AND SALES DEGREE' PROGRAM TRAINS STUDENTS FOR ENTRY INTO MID-MANAGEMENT POSITIONS. THE 'FASHION MERCHANDISING' PROGRAM PROVIDES SPECIALIZED TRAINING FOR STUDENTS INTERESTED IN A CAREER IN RETAILING AND APPAREL MERCHANDISING. THE DEGREE PROGRAMS INCLUDE AN INTERNSHIP IN THE STUDENT'S FIELD AND COURSE WORK IN GENERAL EDUCATION. FIVE BUSINESS MANAGEMENT PROGRAMS ARE OFFERED: 'SMALL BUSINESS MANAGEMENT', 'RETAIL OPERATIONS MANAGEMENT', 'SUPERVISORY MANAGEMENT', 'TRANSPORTATION MANAGEMENT' AND 'HEALTH CARE MANAGEMENT'. THESE PROGRAMS PREPARE STUDENTS FOR ENTRY LEVEL MANAGEMENT OR SUPERVISORY POSITIONS AND/OR UPGRADE PEOPLE FOR CAREERS IN DIFFERENT BUSINESS SETTINGS.

--- DEGREES OFFERED: STUDENTS MAY EARN A VOCATIONAL CERTIFICATE OR AN ASSOCIATE DEGREE IN MARKETING AND SALES. GRADUATES OF THE FASHION MERCHANDISING PROGRAM EARN AN ASSOCIATE DEGREE.

--- LENGTH OF PROGRAM: THE MARKETING AND SALES CERTIFICATE PROGRAM IS ONE YEAR LONG. THE MARKETING AND SALES DEGREE PROGRAM AND THE FASHION MERCHANDISING PROGRAM ARE TWO YEARS LONG.

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: SEVERAL TYPES OF MARKETING PROGRAMS ARE OFFERED. THE SCHOOL OF MANAGEMENT OFFERS CONCENTRATIONS IN MARKETING, MANAGEMENT, MARKET RESEARCH AND ADVERTISING MANAGEMENT. GENERAL COLLEGE'S 2-YEAR 'MARKETING' PROGRAM AND 'PROFESSIONAL SALES' PROGRAM INCLUDES GENERAL EDUCATION AND TECHNICAL COURSES AND AN INTERNSHIP. IT GIVES STUDENTS A CONCENTRATION IN THE BROAD AREA OF BUSINESS. THE COLLEGE OF HOME ECONOMICS OFFERS A 'RETAIL MERCHANDISING' PROGRAM WITH AN APPAREL OR HOME FURNISHINGS OPTION FOR STUDENTS INTERESTED IN BECOMING BUYERS, COORDINATORS, AND DEPARTMENT MANAGERS IN THE RETAILING FIELD. THE COLLEGE OF EDUCATION OFFERS A 'MARKETING EDUCATION' PROGRAM FOR PEOPLE WHO WOULD LIKE TO TEACH MARKETING AND SALES IN HIGH SCHOOL AND POST-SECONDARY SCHOOLS. PEOPLE WHO COMPLETE THIS PROGRAM ARE ELIGIBLE FOR TEACHING LICENSURE AND VOCATIONAL LICENSURE.

--- DEGREES OFFERED: THE SCHOOL OF MANAGEMENT OFFERS A BACHELOR OF SCIENCE IN BUSINESS, AN M.B.A. AND A PH.D. IN BUSINESS ADMINISTRATION, ALL SPECIALIZED IN MARKETING. THE 2-YEAR MARKETING PROGRAM OFFERS AN ASSOCIATE OF ARTS DEGREE. MANY STUDENTS THEN DESIGN A THIRD AND FOURTH YEAR BACCALAUREATE PROGRAM IN THE GENERAL COLLEGE WITH A CONCENTRATION OF STUDIES IN GENERAL BUSINESS CURRICULUM. THE RETAIL MERCHANDISING AND MARKETING EDUCATION PROGRAMS OFFER BACHELOR OF SCIENCE DEGREES. MASTER OF ARTS AND MASTER OF EDUCATION DEGREES ARE ALSO AVAILABLE IN MARKETING EDUCATION.

- - - - - 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS ADMINISTRATION' PROGRAM OFFERS AN OPTION IN 'SALES AND MARKETING' MANAGEMENT. THIS PROGRAM TRAINS

STUDENTS FOR MANAGEMENT POSITIONS IN FIRMS WHICH DISTRIBUTE GOODS AND SERVICES. COURSES INCLUDE MATH, ACCOUNTING, MANAGEMENT, ECONOMICS, ADVERTISING, AND SALES AS WELL AS A SIX CREDIT INTERNSHIP PROGRAM. THE BUSINESS ADMINISTRATION DEPARTMENT MAJOR OFFERS AN OPTION IN 'FASHION MERCHANDISING'. THE PROGRAM IS DESIGNED TO PROVIDE STUDENTS WITH AN UNDERSTANDING OF THE BUSINESS WORLD AND A DEPTH OF KNOWLEDGE IN THE FASHION FIELD. COURSES INCLUDE TEXTILES, FASHION AND DESIGN, RETAILING, ADVERTISING, ECONOMICS AND DATA PROCESSING AND A SIX CREDIT INTERNSHIP.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE WITH A MAJOR IN BUSINESS ADMINISTRATION (SALES AND MARKETING MANAGEMENT OPTION) OR (FASHION MERCHANDISING OPTION) IS OFFERED.

--- LENGTH OF PROGRAM: THESE ARE 2 YEAR PROGRAMS.

- - - - - 81005 UNIVERSITY OF MINNESOTA-WASECA TECHNICAL
COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'AGRICULTURAL SALES AND MARKETING' MAJOR PREPARES STUDENTS FOR WORK IN THE SALES AND MARKETING OF AGRICULTURE-RELATED PRODUCTS. STUDENTS MAY FOCUS ON THE STUDY OF AGRICULTURAL FINANCE. THE 'FAMILY MERCHANDISING' MAJOR PREPARES STUDENTS FOR EMPLOYMENT IN THE BUYING AND SELLING OF GOODS AND SERVICES FOR HOME USE. STUDENTS COMPLETE MAJOR COURSES AND AGRICULTURE AND RELATED COURSES.

--- DEGREES OFFERED: ASSOCIATE IN APPLIED SCIENCE DEGREES ARE OFFERED IN AGRICULTURAL BUSINESS AND HOME AND FAMILY SERVICES.

--- LENGTH OF PROGRAM: THESE ARE 2 YEAR PROGRAMS.

- - - - - 82014 GLOBE COLLEGE OF BUSINESS

--- OBJECTIVES OF THE PROGRAM: THE 'FASHION RETAILING' AND 'RETAIL MANAGEMENT' PROGRAMS ARE DESIGNED TO PREPARE STUDENTS FOR POSITIONS IN THE MERCHANDISING INDUSTRY. THE FASHION RETAILING PROGRAM EMPHASIZES THE AREAS OF BUYING, SALES PROMOTION, AND FASHION COORDINATION. THE RETAIL MANAGEMENT PROGRAM EMPHASIZES BUSINESS MANAGEMENT SKILLS. RELATED COURSE WORK INCLUDES SELLING, TYPING, ACCOUNTING, PROMOTION, RETAIL BUYING, AND BUSINESS COMMUNICATIONS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED UPON SUCCESSFUL COMPLETION OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THE FASHION RETAILING PROGRAM IS 3 QUARTERS LONG. THE RETAIL MANAGEMENT PROGRAM IS 6 QUARTERS LONG.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 82027 MINNESOTA SCHOOL OF BUSINESS

--- OBJECTIVES OF THE PROGRAM: THE 'FASHION MERCHANDISING' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR CAREERS IN THE FASHION INDUSTRY. STUDENTS ARE TRAINED IN METHODS OF RETAIL SELLING, PROMOTION AND DISPLAY, COLOR AND DESIGN, AND TEXTILES.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 48 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$300 FOR BOOKS AND EQUIPMENT.

- - - - - 82030 NORTHERN TECHNICAL SCHOOL OF BUSINESS

--- OBJECTIVES OF THE PROGRAM: THE 'TRAVEL/BUSINESS' PROGRAM COMBINES TRAVEL/TOURISM TRAINING WITH SELECTED BUSINESS SKILLS. THIS DOUBLE CAREER OFFERS THE GRADUATE EMPLOYMENT WITH TRAVEL AGENTS, AIRLINES, CAR RENTALS, BUS COMPANIES, HOTELS, DEPARTMENTS OF TOURISM, AS WELL AS THE TRAVEL

DEPARTMENTS OF LARGE COMPANIES.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED UPON COMPLETION.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 48 WEEKS LONG.

- - - - - 82035 LOWTHIAN COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'FASHION MERCHANDISING AND RETAILING' PROGRAM IS DESIGNED TO PROVIDE THE STUDENT WITH THE KNOWLEDGE AND SKILLS NECESSARY TO ENTER THE FIELD OF FASHION MERCHANDISING. THE PROGRAM PREPARES STUDENTS FOR FUTURE POSITIONS IN BUYING, SELLING, INTERIOR DESIGN, WINDOW DISPLAY, FASHION PUBLICATION, RETAIL ADVERTISING, FASHION COORDINATING AND COMMENTATING, PLUS BOUTIQUE MANAGING, AND BRIDAL CONSULTING. SOME CREDITS MAY BE TRANSFERRED TO OTHER SCHOOLS INCLUDING THE UNIVERSITY OF MINNESOTA, GENERAL COLLEGE.

--- DEGREES OFFERED: GRADUATES OF THE NINE MONTH PROGRAM RECEIVE A DIPLOMA. GRADUATES OF THE TWO YEAR PROGRAM RECEIVE AN ASSOCIATE OF APPLIED SCIENCE.

--- LENGTH OF PROGRAM: THE PROGRAM IS EITHER NINE MONTHS OR TWO YEARS DEPENDING ON THE DEGREE DESIRED.

- - - - - 82038 RASMUSSEN BUSINESS COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'SALES AND BUSINESS ADMINISTRATION' PROGRAM TRAINS STUDENTS FOR SALES WORK AND FOR POSITIONS AS ACCOUNTING CLERKS AND MANAGEMENT TRAINEES. STUDENTS COMPLETE BASIC BUSINESS COURSES IN SUBJECTS SUCH AS BUSINESS MATH, TYPING, BUSINESS LAW, ECONOMICS, AND BUSINESS ENGLISH AS WELL AS MORE SPECIALIZED COURSES IN SALES, MARKETING, AND ACCOUNTING.

THE 'TRAVEL-BUSINESS' PROGRAM OFFERS FOUR COURSES DESIGNED TO PREPARE STUDENTS FOR EMPLOYMENT IN TRAVEL, TOURISM AND BUSINESS. A COMBINATION OF BUSINESS AND TRAVEL SUBJECTS ARE TAUGHT. STUDENTS ARE TRAINED FOR POSITIONS AS RESERVATIONISTS, TOUR GUIDES, COMPUTER RESERVATIONISTS, AND TRAVEL AGENTS IN TRAVEL AGENCIES, AIRLINES, HOTELS, CAR RENTAL AGENCIES, CRUISE LINES, TOURISM DEPARTMENTS, AND CORPORATE TRAVEL DEPARTMENTS. THIS NATIONAL TRAVEL AND AIRLINES CAREER COURSE HAS FOUR SPECIALITIES: 'SECRETARIAL', 'ADMINISTRATIVE ASSISTANT', 'ACCOUNTING' AND 'MANAGEMENT'.

--- DEGREES OFFERED: GRADUATES OF THESE PROGRAMS RECEIVE A DIPLOMA.

--- LENGTH OF PROGRAM: THE 'SALES AND BUSINESS ADMINISTRATION' PROGRAM TAKES ABOUT 48 WEEKS TO COMPLETE DEPENDING ON THE STUDENT'S ABILITY, EDUCATION AND EXPERIENCE. EACH OF THE FOUR TRAVEL-BUSINESS SPECIALTIES REQUIRES 48 WEEKS TO COMPLETE.

- - - - - 82083 SECURITY SCHOOLS, INC.

--- OBJECTIVES OF THE PROGRAM: THE 'INSURANCE', 'SECURITIES', AND 'COMMODITIES' PROGRAMS PREPARES STUDENTS FOR THE VARIOUS LICENSING EXAMS REQUIRED IN THESE FIELDS. SPECIFIC AREAS OF PREPARATION AVAILABLE INCLUDE: SECURITIES SELF-STUDY COURSES IN SERIES 6, 7, AND 63. CLASSROOM PREPARATION INCLUDES: SERIES 7 (REGISTERED REPRESENTATIVES), SERIES 6 (INVESTMENT COMPANIES AND VARIABLE CONTRACTS), SERIES 63 (UNIFORM BLUE SKY), REGISTERED PRINCIPALS, FINANCIAL AND OPERATIONAL PRINCIPAL, REGISTERED OPTION PRINCIPAL, BRANCH OFFICE MANAGER, COMMODITIES AND SECURITY LAW. INSURANCE COURSES INCLUDE: LIFE, ACCIDENT AND HEALTH, PROPERTY AND CASUALTY INSURANCE AND CONTINUING EDUCATION COURSES. STUDENTS ARE USUALLY EMPLOYED IN THE FIELD AND SPONSORED BY A COMPANY IN THE BUSINESS. PRIOR TO ATTENDING THE CLASSES, STUDENTS ARE SENT PRE-STUDY MATERIALS WHICH THEY ARE EXPECTED TO

REVIEW BEFORE ATTENDING CLASS.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED. STUDENTS ARE PREPARED TO TAKE THE LICENSING EXAM IN A GIVEN AREA, BUT MUST APPLY INDIVIDUALLY FOR PERMISSION TO TAKE THE EXAM.

--- LENGTH OF PROGRAM: THE PROGRAMS VARY IN LENGTH FROM 1/2 DAY TO 2 WEEKS.

--- SPECIAL COSTS: TUITION FEES INCLUDE MAJORITY OF COURSE TEXTS AND PRE-STUDIES.

146 MARKETING AND SALES TRANSFER PROGRAMS:

- - - - -	27140	BRAINERD COMMUNITY COLLEGE
- - - - -	27143	HIBBING COMMUNITY COLLEGE
- - - - -	27144	ITASCA COMMUNITY COLLEGE
- - - - -	27145	WILLMAR COMMUNITY COLLEGE
- - - - -	27146	WORTHINGTON COMMUNITY COLLEGE
- - - - -	27147	VERMILION COMMUNITY COLLEGE
- - - - -	27149	NORTHLAND COMMUNITY COLLEGE
- - - - -	27150	MESABI COMMUNITY COLLEGE
- - - - -	83001	BETHANY LUTHERAN JUNIOR COLLEGE
- - - - -	83002	CROSIER SEMINARY JUNIOR COLLEGE
- - - - -	83003	GOLDEN VALLEY LUTHERAN JUNIOR COLLEGE
- - - - -	84014	NORTHWESTERN COLLEGE
- - - - -	84015	PILLSBURY COLLEGE

Real estate programs are designed to teach people the theories and skills of buying, selling, appraising, and managing real property. Programs in real estate are offered at a large number of private vocational schools, at many community colleges, and at a few four-year colleges and universities. Programs vary in length from two weeks to four years. The shorter programs are usually offered at private vocational schools and are usually designed to provide intensive preparation for taking the state real estate examination. Many community colleges offer one-year certificate and two-year associate degree programs in various aspects of the real estate business. Almost all community colleges offer at least a few courses in real estate. Bachelor's and master's degrees in real estate are offered at some four-year colleges and universities.

The state real estate examination must be passed before a person can become a licensed real estate salesperson. (For additional details see PREP 7417.)

---PROGRAM ADMISSION: Admission requirements vary according to school. Community colleges and four-year colleges normally require a high school diploma or its equivalent for admission to undergraduate programs. See school catalogs for more information.

---TYPICAL COURSE WORK: Course work and instruction vary greatly with school and length of program. Longer programs usually include all or most of the following courses:

Business Law	Fundamentals of Advertising
Accounting	Sales Skill
Communications	Report Writing
Economics	Design and Construction
Real Estate Principles	Real Estate Finance
Real Estate Law	Real Estate Practices

Four-year bachelor's degree programs at colleges and universities, and two-year associate degree programs at community colleges usually also include liberal arts courses such as English composition, psychology, mathematics, sociology, and speech. Instruction usually consists of lectures, outside reading, and discussion of assignments and projects. Private vocational schools usually concentrate instruction in sales and brokerage.

---GRADUATION REQUIREMENTS: Requirements vary with school and length of program. See school catalogs for more information.

---RELATED PROGRAMS: PROG 143 Banking and Finance, 145 Business Management and Administration, 146 Marketing and Sales.

---DIRECTLY RELATED OCCUPATION: DESC 7417 Real Estate Agents.

ASSOCIATED OCCUPATION: DESC 7415 Securities Sales Agents.

---REFERENCES:

Real Estate Licensing Division
Securities and Real Estate Division
Department of Commerce
5th Floor, Metro Square Building
7th & Robert Streets
St. Paul, MN 55101

CIPS: 06.17

SCHOOLS:

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'REAL ESTATE SALES' PROGRAM PREPARES INDIVIDUALS TO SELL REAL ESTATE. IT INCLUDES INSTRUCTION IN THE LAWS, THEORIES AND TECHNIQUES OF BUYING, SELLING, AND APPRAISING REAL ESTATE PROPERTY.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES 6 MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS OF \$150 INCLUDE BOOKS AND SUPPLIES.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'REAL ESTATE' PROGRAM IS DESIGNED FOR STUDENTS WHO ARE INTERESTED OR CURRENTLY EMPLOYED IN REAL ESTATE OR REAL ESTATE RELATED OCCUPATIONS. THE PROGRAM PREPARES STUDENTS FOR EMPLOYMENT IN SALES, APPRAISAL, AND REAL ESTATE DEPARTMENTS IN GOVERNMENT, INDUSTRY, AND FINANCIAL INSTITUTIONS.

--- DEGREES OFFERED: A VOCATIONAL CERTIFICATE AND AN ASSOCIATE DEGREE ARE OFFERED.

--- LENGTH OF PROGRAM: ONE AND TWO-YEAR PROGRAMS ARE AVAILABLE.

- - - - - 82028 MINNESOTA SCHOOL OF REAL ESTATE, INC.

--- OBJECTIVES OF THE PROGRAM: 'REAL ESTATE' COURSES ARE OFFERED. THEY ARE FUNDAMENTALS OF REAL ESTATE, ADVANCED FUNDAMENTALS OF REAL ESTATE, AND COURSE III WHICH HAS A WIDE VARIETY OF TOPICS FROM WHICH TO CHOOSE. MANY CONTINUING EDUCATION CLASSES ARE OFFERED AS WELL AS A BROKER'S PREPARATION COURSE AND AN EXAM FOCUS FOR BOTH SALES AND BROKERS.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS AWARDED FOR THESE PROGRAMS.

--- LENGTH OF PROGRAM: DEPENDING ON THE COURSE CHOSEN, LENGTH IS FROM THREE TO 30 HOURS.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 82083 SECURITY SCHOOLS, INC.

--- OBJECTIVES OF THE PROGRAM: THE 'REAL ESTATE' PROGRAM CONSISTS OF COURSES I, II, AND III, REQUIRED FOR LICENSURE AS A REAL ESTATE SALESPERSON. COURSE I PROVIDES THE BASIC PRINCIPLES AND COURSE II BROADENS THE FUNDAMENTALS LEARNED IN COURSE I. COURSE III IS A POST LICENSING OFFERING CONSISTING OF SEVERAL ELECTIVE TOPICS SUCH AS INVESTMENT AND TAXATION, CREATIVE FINANCING, PROPERTY MANAGEMENT, APPRAISAL AND CLOSING. EXAM PREPARATION COURSES ARE OFFERED TO ASSIST IN PASSING THE SALESPERSONS AND BROKERS EXAMS. A COMPLETE CURRICULUM OF CONTINUING EDUCATION COURSES IS OFFERED TO MEET STATE REQUIREMENTS. AREAS OF SPECIALIZATION INCLUDE SECURITY LAW AND SYNDICATION, EXCHANGING, PROPERTY MANAGEMENT AND FINANCIAL PLANNING.

--- DEGREES OFFERED: ALTHOUGH NO DEGREES ARE OFFERED, STUDENTS ARE ABLE TO MEET PRE- AND POST-LICENSING REQUIREMENTS, PASS THE REQUIRED EXAM AND MAINTAIN CONTINUING EDUCATION REQUIREMENTS.

--- LENGTH OF PROGRAM: PROGRAM BEGINS WITH COURSES I, II, AND III, WHICH ARE REQUIRED 30 HOUR COURSES. LICENSE PREPARATION COURSES ARE 15 HOURS AND ALWAYS SCHEDULED 2 DAYS PRIOR TO THE EXAM. CONTINUING EDUCATION COURSES ARE OFFERED IN 3, 7 1/2 AND 15 HOUR SESSIONS AND ARE OFFERED MONTHLY.
--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

147 REAL ESTATE TRANSFER PROGRAMS:
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27145 WILLMAR COMMUNITY COLLEGE

Accounting and bookkeeping programs intend to prepare people for a variety of occupations, ranging from bookkeepers and accounting clerks to professional accountants with specialized skills. Bookkeeping and accounting clerk programs are usually one year in length and are offered at community colleges and vocational schools. Students learn to apply bookkeeping methods to the computing and recording of numerical data using various forms and business machines. Short-term programs in income tax preparation and auditing are also available.

Accounting programs range from two-year associate degree programs offered at community colleges and vocational schools to bachelor's degree and graduate level programs at colleges and universities. Students learn accounting principles and theories and the application of this knowledge to the analysis of financial records and the preparation of financial reports. Programs may offer options for concentrated study in specialized fields in accounting such as managerial accounting, auditing, or tax accounting. Many programs are designed to provide the necessary background for taking the certified public accountant examination required for licensing by the State Board of Accountancy (See PREP 1614 Accountants for CPA licensing details).

---PROGRAM ADMISSION: A background in math will enhance success in accounting and bookkeeping programs. Most graduate-level accounting programs require submitting the results of the Graduate Management Application Test (GMAT) with the application to the program.

---TYPICAL COURSE WORK: In addition to attending lectures, bookkeeping students spend much time actually practicing bookkeeping skills and operating business machines. Core subjects include:

Basic Accounting	Business Law
Business Math	Business English
Typing	Business Machines

Core subjects for accounting programs include:

Accounting Principles	Financial Accounting
Management	Marketing
Economics	Business Law
Data Processing	Taxation
Statistics	Auditing

---GRADUATION REQUIREMENTS: Requirements vary with program and school. See school catalogs for more information.

---RELATED PROGRAMS: PROG 143 Banking and Finance, 145 Business Management and Administration, 481 Mathematics, 583 Economics.

---DIRECTLY RELATED OCCUPATIONS: DESC 1614 Accountants 1616 Bookkeepers, 1615 Accounting and Statistical Clerks.

---References:

Board of Accountancy
Department of Commerce
5th Floor Metro Square Building
7th and Robert Streets
St. Paul, MN 55101

CIPS: 06.02
06.19
07.01

SCHOOLS:

- - - - - 25001 ALBERT LEA AREA VOCATIONAL TECHNICAL INSTITUTE
OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

--- DEGREES OFFERED: A DIPLOMA IN ACCOUNTING IS OFFERED.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 10 MONTHS THE FIRST YEAR AND 9 MONTHS THE SECOND YEAR.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$185 THE FIRST YEAR AND \$155 THE SECOND YEAR.

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

--- DEGREES OFFERED: A DIPLOMA IN ACCOUNTING IS OFFERED.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 20 MONTHS IN LENGTH.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$100 PER YEAR FOR BOOKS.

- - - - - 25004 AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BOOKKEEPING' PROGRAM PREPARES INDIVIDUALS TO COMPUTE, CLASSIFY, AND RECORD NUMERICAL DATA TO KEEP FINANCIAL RECORDS AND LEDGERS AND PREPARE TAX REPORTS AND MONTHLY STATEMENTS.

--- DEGREES OFFERED: DEGREE OF OCCUPATIONAL PROFICIENCY.

--- LENGTH OF PROGRAM: THE BOOKKEEPING PROGRAM IS 10 1/2 MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR 'BOOKKEEPING' INCLUDE \$130 FOR BOOKS/SUPPLIES, AND \$50 MISCELLANEOUS.

- - - - - 25005 BEMIDJI AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 18 MONTHS LONG.

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 10 1/2 TO 19 MONTHS LONG.

- - - - - 25007 CANBY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 20 MONTHS LONG.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAIN-ING AND

AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 22 MONTHS LONG.

- - - - - 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL
INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE
PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING
BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 18 MONTHS LONG.

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE
PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAIN-ING AND
AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 92 WEEKS LONG.

- - - - - 25011 EVELETH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE
PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING
BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 18 MONTHS LONG.

- - - - - 25012 FARIBAULT AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE
PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING
BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 18 MONTHS LONG.

- - - - - 25013 GRANITE FALLS AREA VOCATIONAL TECHNICAL
INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE
PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING
BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 18 MONTHS LONG.

- - - - - 25016 JACKSON AREA VOCATIONAL TECHNICAL INSTITUTE

---OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE
PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAIN-ING AND
AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 20 MONTHS LONG.

- - - - - 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE
PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING
BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 84 WEEKS LONG.

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE
PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING
BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 12 TO 21 MONTHS LONG.

- - - - - 25019 MOORHEAD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE

PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 20 MONTHS LONG.

- - - - - 25020 PINE TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 20 MONTHS LONG.

- - - - - 25021 PIPESTONE AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAIN-ING AND AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 9 TO 22 MONTHS LONG.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 18 MONTHS LONG.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

---OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

THE 'BOOKKEEPING' PROGRAM PREPARES INDIVIDUALS TO COMPUTE, CLASSIFY, AND RECORD NUMERICAL DATA TO KEEP FINANCIAL RECORDS AND LEDGERS AND PREPARE TAX REPORTS AND MONTHLY STATEMENTS.

--- LENGTH OF PROGRAM: THE BOOKKEEPING PROGRAM IS 9 MONTHS LONG WHILE THE ACCOUNTING COURSE IS 18 MONTHS LONG.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 19 1/2 MONTHS LONG.

- - - - - 25025 ST PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

THE 'BOOKKEEPING' PROGRAM PREPARES INDIVIDUALS TO COMPUTE, CLASSIFY, AND RECORD NUMERICAL DATA TO KEEP FINANCIAL RECORDS AND LEDGERS AND PREPARE TAX REPORTS AND MONTHLY STATEMENTS.

--- LENGTH OF PROGRAM: THESE PROGRAMS RUN 11-22 MONTHS LONG.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 6-22 MONTHS LONG.

- - - - - 25028 THIEF RIVER FALLS AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 19 MONTHS LONG.

- - - - - 25029 WADENA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 9 TO 20 MONTHS LONG.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM DESCRIBES THE PRINCIPLES, PROCEDURES AND THEORIES OF ORGANIZING, MAINTAINING AND AUDITING BUSINESS AND FINANCIAL TRANSACTIONS.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS 18 MONTHS LONG.

- - - - - 26070 BEMIDJI STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE BACHELOR OF SCIENCE MAJOR IN 'ACCOUNTING' REQUIRES THE COMPLETION OF 104 CREDITS IN ACCOUNTING AND RELATED FIELD COURSES AND PREPARES STUDENTS FOR PROFESSIONAL POSITIONS BY PROVIDING THEM WITH SKILLS IN ACCOUNTING, BUSINESS, FINANCE AND MATH. USUALLY GRADUATES WILL BE QUALIFIED TO SIT FOR THE CERTIFIED PUBLIC ACCOUNTANT EXAM.

--- DEGREES OFFERED: AN ASSOCIATE OF ARTS DEGREE IN ACCOUNTING TECHNOLOGY AND A BACHELOR OF SCIENCE DEGREE IN ACCOUNTING ARE OFFERED.

--- LENGTH OF PROGRAM: ONE TO FOUR YEARS.

- - - - - 26072 MOORHEAD STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE BACHELOR OF SCIENCE 'ACCOUNTING' MAJOR IS A 98 CREDIT PROGRAM DESIGNED TO PREPARE STUDENTS FOR PROFESSIONAL POSITIONS IN ACCOUNTING. GRADUATES OF THE PROGRAM GENERALLY WILL MEET THE MINIMUM REQUIREMENTS TO SIT FOR THE CERTIFIED PUBLIC ACCOUNTANT EXAM. AN ASSOCIATE IN SCIENCE IN ACCOUNTING IS ALSO OFFERED.

A BACHELOR OF SCIENCE MAJOR IN 'FINANCE' CONSISTS OF 74 CREDITS AND TRAINS THE STUDENT TO ENTER THE FIELD OF FINANCIAL SERVICES EITHER IN PRIVATE BUSINESS OR PUBLIC ORGANIZATIONS. COMMON COURSES INCLUDE: ACCOUNTING, BUSINESS LAW, PRICIPLES OF BANKING OPERATIONS, BUSINESS COMMUNICATIONS, SAVINGS/TIME DEPOSITS, FINANCIAL ANALYSIS, INSURANCE AND BUSINESS MACHINES.

--- DEGREES OFFERED: AN ASSOCIATE OF SCIENCE DEGREE AND A BACHELOR OF SCIENCE DEGREE ARE OFFERED IN THE FIELD OF ACCOUNTING.

--- LENGTH OF PROGRAM: ONE TO FOUR YEARS.

- - - - - 26175 SOUTHWEST STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: AN ASSOCIATE OF SCIENCE MAJOR IN 'ACCOUNTING' PROVIDES THE STUDENT WITH A COMPREHENSIVE EXPOSURE TO BASIC ACCOUNTING AND BUSINESS SKILL CONCEPTS. GRADUATES ARE QUALIFIED TO ACCEPT PRIVATE OR PUBLIC EMPLOYMENT AS ACCOUNT CLERKS OR AS PARA-PROFESSIONAL ACCOUNTANTS. THE BACHELOR OF SCIENCE MAJOR IN ACCOUNTING REQUIRES THE COMPLETION OF 83-84 CREDITS IN ACCOUNTING AND RELATED FIELD COURSES AND IS DESIGNED TO PREPARE STUDENTS FOR PROFESSIONAL ENTRY-LEVEL POSITIONS IN PUBLIC, INDUSTRIAL, OR GOVERNMENTAL ACCOUNTING. GRADUATES WILL BE ACADEMICALLY QUALIFIED TO SIT FOR THE CERTIFIED PUBLIC ACCOUNTANT EXAM, THE

CERTIFIED MANAGEMENT ACCOUNTING EXAM, AND THE CERTIFIED INTERNAL AUDITOR EXAM.

--- DEGREES OFFERED: ASSOCIATE OF SCIENCE AND BACHELOR OF SCIENCE DEGREES ARE OFFERED IN ACCOUNTING.

--- LENGTH OF PROGRAM: TWO YEARS, BACCALAREATE.

- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS ACCOUNTING' PROGRAM PROVIDES STUDENTS WITH THE NECESSARY SKILLS, UNDERSTANDING, AND ATTITUDES FOR PERMANENT, GAINFUL EMPLOYMENT IN THE BUSINESS FIELD.

--- DEGREES OFFERED: A VOCATIONAL CERTIFICATE OR AN ASSOCIATE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE BUSINESS ACCOUNTING PROGRAM IS 18 MONTHS LONG.

- - - - - 27144 ITASCA COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING TECHNOLOGY' PROGRAM INCLUDES GENERAL BUSINESS COURSES SUCH AS TYPING, MATH, BUSINESS COMMUNICATIONS AND BUSINESS LAW AS WELL AS A SERIES OF ACCOUNTING COURSES INCLUDING ACCOUNTING THEORY, INCOME TAX, PAYROLL, AND COST ACCOUNTING. THE PROGRAM IS DESIGNED TO EDUCATE PEOPLE FOR FUTURE EMPLOYMENT IN BUSINESS AND INDUSTRY.

--- DEGREES OFFERED: A VOCATIONAL CERTIFICATE AND AN ASSOCIATE DEGREE IN APPLIED SCIENCE ARE OFFERED.

--- LENGTH OF PROGRAM: THE CERTIFICATE PROGRAM IS 9 MONTHS; THE DEGREE PROGRAM IS TWO YEARS.

- - - - - 27147 VERMILION COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM PREPARES STUDENTS FOR CAREERS IN THE ACCOUNTING FIELD. SOME COURSES OF STUDY INCLUDE BUSINESS MATH, DATA PROCESSING, COST ACCOUNTING, PAYROLL ACCOUNTING, STATE AND FEDERAL INCOME TAX PRINCIPLES OF ACCOUNTING, AND BUSINESS COMMUNICATIONS.

--- DEGREES OFFERED: A CERTIFICATE IS OFFERED.

--- LENGTH OF PROGRAM: THE ACCOUNTING PROGRAM IS ONE YEAR LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE BOOKS AND MATERIALS.

- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM PREPARES GRADUATES FOR EMPLOYMENT DEALING WITH FINANCIAL TRANSACTIONS IN BUSINESS AND INDUSTRY. THIS PROGRAM IS NOT DESIGNED FOR STUDENTS PLANNING A FOUR YEAR PROGRAM IN ACCOUNTING.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS TWO YEARS LONG.

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING TECHNOLOGY' PROGRAM MEET THE NEEDS OF STUDENTS WHO WANT TO PREPARE FOR POSITIONS IN THE ACCOUNTING FIELD. IT PROVIDES STUDENTS WITH A SPECIALIZATION IN PRACTICAL ACCOUNTING AND A GENERAL BUSINESS EDUCATION.

--- DEGREES OFFERED: AN ASSOCIATE OF APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: ACCOUNTING TECHNOLOGY IS A TWO YEAR PROGRAM.

- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM PROVIDES STUDENTS WITH THE SKILLS NECESSARY TO ENTER THE ACCOUNTING PROFESSION UNDER THE SUPERVISION OF A PROFESSIONAL ACCOUNTANT. STUDENTS COMPLETE COURSES IN FINANCIAL ACCOUNTING, MANAGERIAL ACCOUNTING, COMPUTER SCIENCE, OR DATA

PROCESSING, AND BUSINESS/ ACCOUNTING PROBLEM SOLVING. ADDITIONAL COURSES IN SOCIAL SCIENCE, ENGLISH, HUMANITIES, MATH AND SCIENCE ARE INCLUDED IN THE PROGRAM.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 90 QUARTER CREDIT (2-YEAR) PROGRAM.

- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE PURPOSE OF THE 'ACCOUNTING' PROGRAM IS TO PROVIDE FUNDAMENTAL TRAINING FOR STUDENTS WHO WILL SEEK ENTRY LEVEL POSITIONS IN THE ACCOUNTING FIELD. STUDENTS TAKE COURSES IN PRINCIPLES OF ACCOUNTING, COST ACCOUNTING, PAYROLL ACCOUNTING, INCOME TAX, DATA PROCESSING, MATH, OFFICE MACHINES, AND TYPING.

--- DEGREES OFFERED: STUDENTS MAY EARN A CERTIFICATE OF COMPETENCY OR A CERTIFICATE OF ATTENDANCE IN THIS PROGRAM. THOSE WHO TAKE ADDITIONAL COURSES MAY ALSO EARN AN ASSOCIATE IN SCIENCE DEGREE.

--- LENGTH OF PROGRAM: STUDENTS MAY EARN A CERTIFICATE AFTER ONE YEAR AND AN ASSOCIATE DEGREE AFTER TWO YEARS.

- - - - - 27156 NORMANDALE COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING TECHNOLOGY' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR SEVERAL ENTRY LEVEL JOBS IN THE ACCOUNTING FIELD. DEMAND FOR ACCOUNTING WORKERS IS PARTICULARLY STRONG IN BANKS, INSURANCE COMPANIES, MANUFACTURING FIRMS, GOVERNMENT OFFICES AND PROFESSIONAL SERVICE ORGANIZATIONS. ENTRY LEVEL POSITIONS IN THE ACCOUNTING FIELD INCLUDE JUNIOR ACCOUNTANT, JUNIOR AUDITOR, COST ACCOUNTING CLERK, BOOKKEEPER, JUNIOR EXECUTIVE TRAINEE AND MANY OTHERS. THE PROGRAM ALSO OFFERS AN OPTION IN CREDIT AND FINANCE FOR THOSE WHO WISH TO SPECIALIZE IN THIS AREA.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A TWO YEAR PROGRAM.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM AND THE 'ACCOUNTING CERTIFICATE' PROGRAM PREPARE STUDENTS FOR CAREERS AS ACCOUNTING TECHNICIANS. BOTH PROGRAMS INCLUDE COURSES IN ACCOUNTING PRINCIPLES, INCOME TAX AND COST ACCOUNTING, COMPUTER SCIENCE, HUMAN RELATIONS, AND ECONOMICS. THE 'MANAGEMENT' PROGRAM INCLUDES GENERAL EDUCATION COURSES AND AN INTERNSHIP.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE AND A VOCATIONAL CERTIFICATE ARE OFFERED.

--- LENGTH OF PROGRAM: THE CERTIFICATE PROGRAM IS ONE YEAR LONG WHILE THE ASSOCIATE DEGREE REQUIRES TWO YEARS OF STUDY.

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: THE SCHOOL OF MANAGEMENT "ACCOUNTING" PROGRAM OFFERS PROFESSIONAL ACCOUNTING EDUCATION INCLUDING BUSINESS COURSES AND IN-DEPTH STUDIES IN ACCOUNTING THEORY AND PRACTICE. THIS PROGRAM OFFERS THE BASIC PREPARATION FOR THE CERTIFIED PUBLIC ACCOUNTANT, MANAGEMENT ACCOUNTANT, AND INTERNAL AUDITOR EXAMS. STUDENTS ENTER THIS PROGRAM AFTER COMPLETING 2 YEARS OF A PRE-BUSINESS PROGRAM. THIS PROGRAM CAN ALSO BE COMPLETED THROUGH EXTENSION CLASSES. CONTINUING EDUCATION AND EXTENSION OFFERS CERTIFICATE PROGRAMS IN JUNIOR ACCOUNTING (55-59 CREDITS) AND SENIOR ACCOUNTING (94-95 CREDITS). JUNIOR ACCOUNTING IS VALUABLE FOR THOSE NEEDING

A BASIC UNDERSTANDING OF ACCOUNTING PRINCIPLES. SENIOR ACCOUNTING GIVES A SOUND BACKGROUND FOR INDEPENDENT STUDY LEADING TO THE CERTIFIED PUBLIC ACCOUNTANT EXAM.

--- DEGREES OFFERED: JUNIOR ACCOUNTING AND SENIOR ACCOUNTING CERTIFICATES ARE AWARDED IN THE CERTIFICATE PROGRAMS. THE SCHOOL OF MANAGEMENT PROGRAM OFFERS A BACHELOR OF SCIENCE IN BUSINESS/ACCOUNTING DEGREE. MASTER OF BUSINESS ADMINISTRATION AND DOCTOR OF PHILOSOPHY DEGREES ARE ALSO OFFERED.

- - - - - 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM PREPARES STUDENTS TO PERFORM VARIOUS DUTIES WHICH MAY BE REQUIRED OF ACCOUNTANTS. COURSES INCLUDE PRINCIPLES OF ACCOUNTING, INCOME TAX AND COST ACCOUNTING, DATA PROCESSING, COMPUTER PROGRAMMING, MATH, ECONOMICS, AND BUSINESS LAW AS WELL AS A SIX CREDIT INTERNSHIP PROGRAM.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE WITH A MAJOR IN ACCOUNTING IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 82001 ACADEMY OF ACCOUNTANCY

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING' PROGRAM IS DESIGNED TO TRAIN THE STUDENT FOR A CAREER AS A CPA AND ACCOUNTANT IN BUSINESS, INDUSTRY AND GOVERNMENT. BESIDES THE ACCOUNTING EMPHASIS, STUDENTS ARE ALSO EXPOSED TO THE AREAS OF COMMERCIAL LAW, INCOME TAXES, AUDITING, BUDGETING, AND DATA PROCESSING.

--- DEGREES OFFERED: GRADUATES OF THIS PROGRAM RECEIVE CERTIFICATES AND ARE QUALIFIED TO TAKE THE CERTIFIED PUBLIC ACCOUNTANT EXAM.

--- LENGTH OF PROGRAM: THE PROGRAM IS 24 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS AND A CALCULATOR.

- - - - - 82008 DULUTH BUSINESS UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING AND BUSINESS ADMINISTRATION' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR CAREERS IN ADMINISTRATIVE ACCOUNTING IN THE PRIVATE AND PUBLIC SECTORS. THE 'JUNIOR ACCOUNTING' PROGRAM IS DESIGNED TO PROVIDE STUDENTS WITH A THOROUGH KNOWLEDGE OF THE FUNDAMENTAL PRINCIPLES OF ACCOUNTING, BUSINESS METHODS, AND PROCEDURES. SOME COURSES APPLICABLE TO BOTH PROGRAMS ARE MATH, ENGLISH, BUSINESS LAW, ACCOUNTING, COST ACCOUNTING, TYPING, TAX MANAGEMENT AND SUPERVISION AND CALCULATING MACHINES.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE ACCOUNTING AND BUSINESS ADMINISTRATION PROGRAM IS 72 WEEKS LONG WHILE THE JUNIOR ACCOUNTING PROGRAM IS 48 WEEKS LONG.

- - - - - 82014 GLOBE COLLEGE OF BUSINESS

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS ADMINISTRATION' PROGRAM PREPARES STUDENTS FOR ADMINISTRATIVE POSITIONS IN THE AREA OF BUSINESS. THE PROGRAM EMPHASIZES ACCOUNTING AND IS STRENGTHENED WITH A SEQUENCE OF SUBJECTS RELATED TO THE ACCOUNTING FIELD. COURSE WORK INCLUDES ACCOUNTING, AUDITING, MATH, ECONOMICS, PERSONAL FINANCE, MARKETING, TYPING, AND BUSINESS COMMUNICATIONS. THE 'ACCOUNTING' PROGRAM TRAINS STUDENTS IN THE AREAS OF BOOKKEEPING AND ACCOUNTING IN PREPARATION FOR CAREERS IN BUSINESS, INDUSTRY AND GOVERNMENT. COURSES INCLUDE ACCOUNTING, INCOME TAX, BUSINESS COMMUNICATIONS, PERSONAL LAW, BUSINESS LAW, MARKETING, PERSONAL FINANCE AND TYPING.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED UPON SUCCESSFUL COMPLETION OF THE COURSE WORK.

--- LENGTH OF PROGRAM: THE BUSINESS ADMINISTRATION PROGRAM IS 6 QUARTERS LONG, THE ACCOUNTING PROGRAM IS 5 QUARTERS LONG.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 82015 H & R BLOCK, INC.

--- OBJECTIVES OF THE PROGRAM: THE H & R BLOCK 'INCOME TAX PREPARATION' PROGRAM IS DESIGNED TO TRAIN STUDENTS TO ACCURATELY PREPARE FEDERAL, STATE, AND LOCAL INCOME TAXES. COURSE WORK INCLUDES: FILING REQUIREMENTS, EXEMPTIONS, ITEMIZED DEDUCTIONS, ROYALTIES, RETIREMENT PLANS, GAS TAX CREDIT, PARTNERSHIPS, CORPORATIONS, AND PENSIONS.

--- DEGREES OFFERED: AN H & R BLOCK DIPLOMA IS AWARDED UPON SUCCESSFUL COMPLETION OF THE COURSE REQUIREMENTS.

--- LENGTH OF PROGRAM: THE PROGRAM IS 75 HOURS LONG AND CAN BE COMPLETED IN EITHER 12 OR 9 WEEKS.

- - - - - 82023 MINNEAPOLIS BUSINESS COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE ACCOUNTING DEPARTMENT OFFERS TWO MAJOR PROGRAMS. THESE ARE: 'ACCOUNTING', AND 'ACCOUNTING INTERNSHIP HONORS'. THESE PROGRAMS ARE DESIGNED TO PREPARE STUDENTS FOR ENTRY LEVEL POSITIONS IN BUSINESS, ACCOUNTING, OR MANAGEMENT. ACCOUNTING, BUSINESS COMMUNICATIONS, TYPEWRITING, MICRO-COMPUTER APPLICATIONS, AND BUSINESS MATHEMATICS ARE COMMON COURSES OF STUDY. PERSONAL AND PROFESSIONAL DEVELOPMENT COURSES ARE OFFERED. NO LIBERAL ARTS COURSES ARE REQUIRED.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED UPON SUCCESSFUL COMPLETION OF EACH OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: ACCOUNTING IS A 10 OR 12 MONTHS PROGRAM.

--- SPECIAL COSTS: THE COST OF BOOKS AND MATERIALS IS NOT INCLUDED IN THE TUITION.

- - - - - 82027 MINNESOTA SCHOOL OF BUSINESS

--- OBJECTIVES OF THE PROGRAM: THE 'JUNIOR ACCOUNTING', 'SENIOR ACCOUNTING', AND 'ACCOUNTING AND DATA PROCESSING' PROGRAMS ARE DESIGNED TO TRAIN STUDENTS FOR CAREERS IN THE ACCOUNTING FIELD. COMMON AREAS OF STUDY ARE BUSINESS LAW, ACCOUNTING, BUSINESS COMMUNICATIONS, AND TYPING. THE LAST TWO PROGRAMS ALSO OFFER ADVANCED COURSES.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED IN ALL THREE OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THE SENIOR ACCOUNTING PROGRAM IS 96 WEEKS LONG. THE JUNIOR ACCOUNTING PROGRAM IS 60 WEEKS LONG, AND THE ACCOUNTING AND DATA PROCESSING PROGRAM IS 96 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS AND EQUIPMENT.

- - - - - 82030 NORTHERN TECHNICAL SCHOOL OF BUSINESS

--- OBJECTIVES OF THE PROGRAM: THE 'ACCOUNTING ASSISTANT' PROGRAM IS DESIGNED TO PREPARE A GRADUATE FOR ENTRY-LEVEL ACCOUNTING AND OFFICE POSITIONS. CLASSES ARE OFFERED IN BASIC ACCOUNTING, CLERICAL AND BUSINESS SUBJECTS. THE 'ADMINISTRATIVE ACCOUNTING' PROGRAM PROVIDES A COMBINATION OF ACCOUNTING AND PRACTICAL BUSINESS KNOWLEDGE NECESSARY FOR ENTRY INTO AN INTERMEDIATE ACCOUNTING POSITION.

--- DEGREE OFFERED: A DIPLOMA IS AWARDED UPON COMPLETION.

--- LENGTH OF PROGRAM: THE ACCOUNTING ASSISTANT PROGRAM IS 36 WEEKS LONG. THE ADMINISTRATIVE ACCOUNTING PROGRAM IS 48 WEEKS LONG.

- - - - - 82038 RASMUSSEN BUSINESS COLLEGE

--- OBJECTIVES OF THE PROGRAM: THREE ACCOUNTING COURSES ARE OFFERED: 'ACCOUNTING ASSISTANT', WHICH PREPARES STUDENTS FOR ACCOUNTING CLERK AND BOOKKEEPING JOBS; 'JUNIOR ACCOUNTING', WHICH PREPARES STUDENTS FOR JUNIOR

ACCOUNTANT AND SMALL BUSINESS MANAGEMENT JOBS; AND 'HIGHER ACCOUNTING AND BUSINESS ADMINISTRATION', WHICH PREPARES STUDENTS FOR POSITIONS AS ACCOUNTANTS OR MANAGEMENT TRAINEES. BASIC COURSE WORK IS SIMILAR, BUT ADDITIONAL ACCOUNTING COURSES ARE REQUIRED IN THE LONGER PROGRAMS.

--- DEGREES OFFERED: EACH OF THESE COURSES OFFERS A DIPLOMA.

--- LENGTH OF PROGRAM: THE ACCOUNTING ASSISTANT COURSE IS 36 WEEKS LONG, JUNIOR ACCOUNTING IS 48 WEEKS LONG, AND HIGHER ACCOUNTING IS A 72-WEEK PROGRAM. THESE ARE AVERAGE COMPLETION TIMES. INDIVIDUAL STUDENTS MAY REQUIRE MORE OR LESS TIME DEPENDING ON THEIR ABILITIES, EDUCATION, AND EXPERIENCE. MANKATO STUDENTS MAY BE REQUIRED TO TRANSFER TO THE MAIN CAMPUS IN ST. PAUL TO COMPLETE THE FINAL ONE THIRD OF THE HIGHER ACCOUNTING PROGRAM.

- - - - - 82039 ST. CLOUD BUSINESS COLLEGE

--- OBJECTIVES OF THE PROGRAM: TWO ACCOUNTING PROGRAMS ARE OFFERED. THE 'JUNIOR ACCOUNTING' PROGRAM TRAINS THE STUDENT IN THE BASICS OF ACCOUNTING AND BUSINESS PROCEDURES AND PREPARES PEOPLE FOR WORK AS ACCOUNTING CLERKS OR BOOKKEEPERS. THE 'HIGHER ACCOUNTING AND BUSINESS ADMINISTRATION' PROGRAM PROVIDES MORE ADVANCED TRAINING IN ACCOUNTING AND BUSINESS. STUDENTS LEARN TO SUMMARIZE, ANALYZE, VERIFY, AND REPORT UPON ALL OF THE FINANCIAL TRANSACTIONS OF A BUSINESS.

--- DEGREES OFFERED: EACH OF THESE PROGRAMS OFFERS A DIPLOMA.

--- LENGTH OF PROGRAM: THE PROGRAMS MAY VARY IN LENGTH DEPENDING UPON THE STUDENT'S EXPERIENCE, EDUCATION, AND ABILITY. HOWEVER, THE AVERAGE LENGTH OF THE JUNIOR ACCOUNTING PROGRAM IS FOUR QUARTERS, WHILE THE AVERAGE LENGTH OF THE HIGHER ACCOUNTING PROGRAM IS SIX QUARTERS.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

157 ACCOUNTING TRANSFER PROGRAMS:

- - - - - 27139 AUSTIN COMMUNITY COLLEGE
- - - - - 27140 BRAINERD COMMUNITY COLLEGE
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27145 WILLMAR COMMUNITY COLLEGE
- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE
- - - - - 27148 ROCHESTER COMMUNITY COLLEGE
- - - - - 81003 UNIVERSITY OF MINNESOTA - MORRIS
- - - - - 83001 BETHANY LUTHERAN JUNIOR COLLEGE
- - - - - 83002 CROSIER SEMINARY JUNIOR COLLEGE
- - - - - 83003 GOLDEN VALLEY LUTHERAN JUNIOR COLLEGE
- - - - - 84013 NORTH CENTRAL BIBLE COLLEGE
- - - - - 84014 NORTHWESTERN COLLEGE
- - - - - 84015 PILLSBURY COLLEGE

Programs in secretarial studies and office administration intend to prepare people for employment in offices doing clerical work, such as typing, taking dictation, operating office machines, making appointments, or organizing and supervising office functions. Programs vary greatly in length, from five-week (or shorter) training courses in individual skills, such as receptionist, to four-year bachelor's degree programs in office administration or office management.

A large number of community colleges, and an even larger number of private business and training schools offer programs of various lengths, designed to teach office skills. Many programs concentrate on teaching the skills needed for working in particular kinds of offices, such as medical offices, real estate offices, or travel agencies. Some programs concentrate on preparing people to take the civil service clerical examination. A few four-year colleges and universities offer four-year bachelor's degree programs in office administration. These programs are designed to prepare administrative assistants and executive secretaries for management responsibilities.

---PROGRAM ADMISSION: Most schools prefer or require that applicants have a high school diploma or its equivalent.

---TYPICAL COURSE WORK: Course work varies with school, length of program, and specialty. Most longer programs include all or most of the following:

Office Procedures	Business Machines
Business Math	Personnel Relations
Typing	Filing and Records Management
Shorthand	Business Correspondence
Word Processing	

Other classes may pertain to specialty fields such as medical, dental, or legal secretary training, with classes emphasizing the terminology used in those professions. Two-year associate degree and four-year bachelor's degree programs also include general education requirements, such as English composition, communication skills, and health. See school catalogs for more information.

---THINGS TO KNOW: Civil service examinations, which must be taken for clerical employment with the government, require typing skills of 40-80 words per minute as well as spelling, punctuation, grammar, and vocabulary skills.

---RELATED PROGRAMS: PROG 145 Business Management and Administration, 157 Accounting, 366 Medical Assisting, 358 Allied Dental Services, 214 Data Processing.

---DIRECTLY RELATED OCCUPATIONS: DESC 1416 Clerk Typists, 1418 General Office Clerks, 1442 Secretaries, 1414 Stenographers, 1452 Receptionists, 1424 Travel Agents, 7116 Shipping and Receiving Clerks, 1411 Office Managers, 1415 Shorthand Reporters, 1421 Word Processing Machine Operators, 1438 Data Entry Operators, 1439 Office Machine Operators, 14422 Legal Secretaries, 14424 Medical Secretaries, 1454 Telephone and Teletype Operators, 1458 Front Desk Clerks.

ASSOCIATED OCCUPATIONS: DESC 1186 Personnel Officers, 1425 Ticket Agents, 1431 Medical Records Technicians.

SCHOOLS:

- - - - - 25001 ALBERT LEA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 9 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$80 FOR BOOKS AND SUPPLIES.

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

THE 'LEGAL SECRETARIAL WITH SHORTHAND' PROGRAM TRAINS INDIVIDUALS TO PREPARE LEGAL PAPERS AND CORRESPONDENCE, SUCH AS SUMMONSES, COMPLAINTS, MOTIONS, AND SUBPOENAS. INSTRUCTION IN SHORTHAND, LEGAL TERMINOLOGY, PROCEDURES, AND DOCUMENTS, AND LAW LIBRARY RESEARCH IS INCLUDED.

THE 'MEDICAL SECRETARIAL WITHOUT SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO PERFORM MEDICAL DUTIES UTILIZING A KNOWLEDGE OF MEDICAL TERMINOLOGY AND HOSPITAL, CLINIC OR LABORATORY PROCEDURES, AND TRANSCRIPTION SKILLS. INSTRUCTION IN WRITING REPORTS, SUCH AS CASE HISTORIES AND INSURANCE REPORTS IS INCLUDED. IT DOES NOT REQUIRE SHORTHAND SKILLS.

THE 'CLERK-TYPIST' PROGRAM PREPARES INDIVIDUALS TO USE TYPEWRITERS IN A VARIETY OF ACTIVITIES, INCLUDING CORRESPONDENCE AND COMPILING AND TYPING REPORTS, APPLICATION FORMS, SHIPPING TICKETS, AND OTHER DATA FROM CLERICAL RECORDS. INSTRUCTION IN FILING RECORDS AND REPORTS, POSTING INFORMATION TO RECORDS, SORTING AND DISTRIBUTING MAIL, ANSWERING TELEPHONES, AND COMPUTING WITH CALCULATING MACHINES IS INCLUDED.

--- DEGREES OFFERED: DIPLOMAS ARE OFFERED.

--- LENGTH OF PROGRAM: THE CLERK-TYPIST PROGRAM AND THE SECRETARIAL PROGRAM ARE EACH 9 MONTHS LONG. THE LEGAL SECRETARIAL PROGRAM IS 10 MONTHS LONG WHILE THE MEDICAL SECRETARIAL PROGRAM IS 11 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$90 FOR BOOKS FOR THE CLERK-TYPIST PROGRAM; \$90 FOR BOOKS FOR THE SECRETARY PROGRAM; \$85 FOR BOOKS FOR THE LEGAL SECRETARY PROGRAM; AND \$135 FOR BOOKS AND UNIFORMS FOR THE MEDICAL SECRETARY PROGRAM.

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

THE 'LEGAL SECRETARIAL WITH SHORTHAND' PROGRAM TRAINS INDIVIDUALS TO PREPARE LEGAL PAPERS AND CORRESPONDENCE, SUCH AS SUMMONSES, COMPLAINTS, MOTIONS, AND SUBPOENAS. INSTRUCTION IN SHORTHAND, LEGAL TERMINOLOGY,

PROCEDURES, AND DOCUMENTS, AND LAW LIBRARY RESEARCH IS INCLUDED.
THE 'MEDICAL SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO PERFORM MEDICAL SECRETARIAL DUTIES. INSTRUCTION IN SHORTHAND, WRITING REPORTS, SUCH AS CASE HISTORIES, UNDERSTANDING LEGAL AND INSURANCE FORMS, UTILIZING A KNOWLEDGE OF MEDICAL TERMINOLOGY AND HOSPITAL, CLINICAL, OR LABORATORY PROCEDURES ARE INCLUDED.

THE 'MEDICAL SECRETARIAL WITHOUT SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO PERFORM MEDICAL DUTIES UTILIZING A KNOWLEDGE OF MEDICAL TERMINOLOGY AND HOSPITAL, CLINICAL OR LABORATORY PROCEDURES, AND TRANSCRIPTION SKILLS. INSTRUCTION IN WRITING REPORTS, SUCH AS CASE HISTORIES AND INSURANCE REPORTS IS INCLUDED. IT DOES NOT REQUIRE SHORTHAND SKILLS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED IN EACH PROGRAM.

--- LENGTH OF PROGRAM: THESE PROGRAMS VARY FROM 15 WEEKS TO 39 WEEKS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE: \$120 FOR BOOKS AND SUPPLIES FOR SECRETARY, \$130 FOR LEGAL SECRETARY, \$100 FOR MEDICAL SECRETARY, THERE IS A \$20 LAB FEE FOR ALL PROGRAMS.

- - - - - 25004 AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE SECRETARIAL PROGRAM TAKES A MINIMUM OF 10 1/2 MONTHS TO COMPLETE.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$150 FOR BOOKS/SUPPLIES AND \$50 MISCELLANEOUS.

- - - - - 25005 BEMIDJI AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'LEGAL SECRETARIAL WITHOUT SHORTHAND' PROGRAM TRAINS INDIVIDUALS TO PREPARE LEGAL PAPERS AND CORRESPONDENCE, SUCH AS SUMMONSES, COMPLAINTS, MOTIONS, AND SUBPOENAS. INSTRUCTION IN LEGAL TERMINOLOGY, PROCEDURES, AND DOCUMENTS, AS WELL AS LAW LIBRARY RESEARCH IS INCLUDED. SHORTHAND IS NOT REQUIRED OF THE GRADUATE.

THE 'MEDICAL SECRETARIAL WITHOUT SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO PERFORM MEDICAL DUTIES UTILIZING A KNOWLEDGE OF MEDICAL TERMINOLOGY AND HOSPITAL, CLINICAL OR LABORATORY PROCEDURES, AND TRANSCRIPTION SKILLS. INSTRUCTION IN WRITING REPORTS, SUCH AS CASE HISTORIES AND INSURANCE REPORTS IS INCLUDED. IT DOES NOT REQUIRE SHORTHAND SKILLS.

THE 'CLERK-TYPIST' PROGRAM PREPARES INDIVIDUALS TO USE TYPEWRITERS IN A VARIETY OF ACTIVITIES, INCLUDING CORRESPONDENCE AND COMPILING AND TYPING REPORTS, APPLICATION FORMS, SHIPPING TICKETS, AND OTHER DATA FROM CLERICAL RECORDS. INSTRUCTION IN FILING RECORDS AND REPORTS, POSTING INFORMATION TO RECORDS, SORTING AND DISTRIBUTING MAIL, ANSWERING TELEPHONES, AND COMPUTING WITH CALCULATING MACHINES IS INCLUDED.

--- DEGREES OFFERED: DIPLOMAS ARE OFFERED IN EACH OF THE PROGRAMS.

--- LENGTH OF PROGRAM: THE SECRETARIAL STUDIES PROGRAMS ARE BETWEEN 9 AND 10 1/2 MONTHS LONG.

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: FIVE PROGRAMS IN SECRETARIAL STUDIES ARE OFFERED. THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN

A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

THE 'CLERK-TYPIST' PROGRAM PREPARES INDIVIDUALS TO USE TYPEWRITERS IN A VARIETY OF ACTIVITIES, INCLUDING CORRESPONDENCE AND COMPILING AND TYPING REPORTS, APPLICATION FORMS, SHIPPING TICKETS, AND OTHER DATA FROM CLERICAL RECORDS. INSTRUCTION IN FILING RECORDS AND REPORTS, POSTING INFORMATION TO RECORDS, SORTING AND DISTRIBUTING MAIL, ANSWERING TELEPHONES, AND COMPUTING WITH CALCULATING MACHINES IS INCLUDED.

THE 'LEGAL SECRETARIAL WITHOUT SHORTHAND' PROGRAM TRAINS INDIVIDUALS TO PREPARE LEGAL PAPERS AND CORRESPONDENCE, SUCH AS SUMMONSES, COMPLAINTS, MOTIONS, AND SUBPOENAS. INSTRUCTION IN LEGAL TERMINOLOGY, PROCEDURES, AND DOCUMENTS, AS WELL AS LAW LIBRARY RESEARCH IS INCLUDED. SHORTHAND IS NOT REQUIRED OF THE GRADUATE.

THE 'MEDICAL SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO PERFORM MEDICAL SECRETARIAL DUTIES. INSTRUCTION IN SHORTHAND, WRITING REPORTS, SUCH AS CASE HISTORIES, UNDERSTANDING LEGAL AND INSURANCE FORMS, UTILIZING A KNOWLEDGE OF MEDICAL TERMINOLOGY AND HOSPITAL, CLINICAL, OR LABORATORY PROCEDURES ARE INCLUDED.

THE 'WORD PROCESSING' PROGRAM PREPARES INDIVIDUALS TO EDIT AND PRODUCE WRITTEN COMMUNICATIONS. INSTRUCTION IN UTILIZING SPECIAL PURPOSE MACHINES TO CORRECT, FORMAT, AND PRINT INFORMATION IS INCLUDED.

--- DEGREES OFFERED: DIPLOMAS OF COMPLETION AND CERTIFICATES OF ATTENDANCE ARE OFFERED IN THE CLERK-TYPIST, SECRETARIAL WITH SHORTHAND, LEGAL SECRETARY, MEDICAL SECRETARY AND WORD PROCESSING PROGRAMS.

--- LENGTH OF PROGRAM: THE CLERK-TYPIST PROGRAM IS 9 MONTHS LONG. THE LEGAL SECRETARY, MEDICAL SECRETARY, SECRETARIAL WITH SHORTHAND, AND WORD PROCESSING PROGRAMS ARE ALL 10 1/2 MONTHS LONG.

--- SPECIAL COSTS: BOOKS FOR THESE PROGRAMS COST: CLERK-TYPIST \$130; SECRETARIAL WITH SHORTHAND \$180; LEGAL SECRETARY \$299. UNIFORMS FOR THE MEDICAL SECRETARY PROGRAM COST \$225.

- - - - - 25007 CANBY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

--- DEGREES OFFERED: A DIPLOMA OF GRADUATION IS OFFERED IN THE SECRETARIAL PROGRAM.

--- LENGTH OF PROGRAM: THE SECRETARIAL PROGRAM IS 9 MONTHS LONG.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

--- DEGREES OFFERED: CERTIFICATES AND DEGREES OF OCCUPATIONAL PROFICIENCY ARE OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS FROM 9 TO 15 MONTHS LONG.

- - - - - 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 9 MONTHS LONG.

--- SPECIAL COSTS: COSTS ARE \$150 FOR BOOKS, \$75 FOR FIELD TRIPS AND \$50 FOR SUPPLIES.

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

THE 'LEGAL SECRETARIAL WITH SHORTHAND' PROGRAM TRAINS INDIVIDUALS TO PREPARE LEGAL PAPERS AND CORRESPONDENCE, SUCH AS SUMMONSES, COMPLAINTS, MOTIONS, AND SUBPOENAS. INSTRUCTION IN SHORTHAND, LEGAL TERMINOLOGY, PROCEDURES, AND DOCUMENTS, AND LAW LIBRARY RESEARCH IS INCLUDED.

THE 'MEDICAL SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO PERFORM MEDICAL SECRETARIAL DUTIES. INSTRUCTION IN SHORTHAND, WRITING REPORTS, SUCH AS CASE HISTORIES, UNDERSTANDING LEGAL AND INSURANCE FORMS, UTILIZING A KNOWLEDGE OF MEDICAL TERMINOLOGY AND HOSPITAL, CLINIC, OR LABORATORY PROCEDURES ARE INCLUDED.

--- DEGREES OFFERED: A CERTIFICATE OR DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE UP TO 54 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR EACH PROGRAM WILL BE \$280. THIS FIGURE INCLUDES BOOKS, SUPPLIES AND EQUIPMENT.

- - - - - 25011 EVELETH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

THE 'CLERK-TYPIST' PROGRAM PREPARES INDIVIDUALS TO USE TYPEWRITERS IN A VARIETY OF ACTIVITIES, INCLUDING CORRESPONDENCE AND COMPILING AND TYPING REPORTS, APPLICATION FORMS, SHIPPING TICKETS, AND OTHER DATA FROM CLERICAL RECORDS. INSTRUCTION IN FILING RECORDS AND REPORTS, POSTING INFORMATION TO RECORDS, SORTING AND DISTRIBUTING MAIL, ANSWERING TELEPHONES, AND COMPUTING WITH CALCULATING MACHINES IS INCLUDED.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: BOTH PROGRAMS ARE 9 MONTHS LONG.

- - - - - 25012 FARIBAULT AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING

DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 9 MONTHS LONG.

- - - - - 25013 GRANITE FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

THE 'LEGAL SECRETARIAL WITH SHORTHAND' PROGRAM TRAINS INDIVIDUALS TO PREPARE LEGAL PAPERS AND CORRESPONDENCE, SUCH AS SUMMONSES, COMPLAINTS, MOTIONS, AND SUBPOENAS. INSTRUCTION IN SHORTHAND, LEGAL TERMINOLOGY, PROCEDURES, AND DOCUMENTS, AND LAW LIBRARY RESEARCH IS INCLUDED.

THE 'MEDICAL SECRETARIAL WITHOUT SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO PERFORM MEDICAL DUTIES UTILIZING A KNOWLEDGE OF MEDICAL TERMINOLOGY AND HOSPITAL, CLINIC OR LABORATORY PROCEDURES, AND TRANSCRIPTION SKILLS. INSTRUCTION IN WRITING REPORTS, SUCH AS CASE HISTORIES AND INSURANCE REPORTS IS INCLUDED. IT DOES NOT REQUIRE SHORTHAND SKILLS.

THE 'CLERK-TYPIST' PROGRAM PREPARES INDIVIDUALS TO USE TYPEWRITERS IN A VARIETY OF ACTIVITIES, INCLUDING CORRESPONDENCE AND COMPILING AND TYPING REPORTS, APPLICATION FORMS, SHIPPING TICK-ETS, AND OTHER DATA FROM CLERICAL RECORDS. INSTRUCTION IN FILING RECORDS AND REPORTS, POSTING INFORMATION TO RECORDS, SORTING AND DISTRIBUTING MAIL, ANSWERING TELEPHONES, AND COMPUTING WITH CALCULATING MACHINES IS INCLUDED.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION AND A DIPLOMA ARE OFFERED.

--- LENGTH OF THE PROGRAM: THESE PROGRAMS ARE ALL 9 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$60 FOR BOOKS AND SUPPLIES.

- - - - - 25015 HUTCHINSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CLERK-TYPIST' PROGRAM PREPARES INDIVIDUALS TO USE TYPEWRITERS IN A VARIETY OF ACTIVITIES, INCLUDING CORRESPONDENCE AND COMPILING AND TYPING REPORTS, APPLICATION FORMS, SHIPPING TICKETS, AND OTHER DATA FROM CLERICAL RECORDS. INSTRUCTION IN FILING RECORDS AND REPORTS, POSTING INFORMATION TO RECORDS, SORTING AND DISTRIBUTING MAIL, ANSWERING TELEPHONES, AND COMPUTING WITH CALCULATING MACHINES IS INCLUDED.

THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

THE 'MEDICAL SECRETARIAL WITHOUT SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO PERFORM MEDICAL DUTIES UTILIZING A KNOWLEDGE OF MEDICAL TERMINOLOGY AND HOSPITAL, CLINICAL OR LABORATORY PROCEDURES, AND TRANSCRIPTION SKILLS. INSTRUCTION IN WRITING REPORTS, SUCH AS CASE HISTORIES AND INSURANCE REPORTS IS INCLUDED. IT DOES NOT REQUIRE SHORTHAND SKILLS.

THE 'LEGAL SECRETARIAL WITH SHORTHAND' PROGRAM TRAINS INDIVIDUALS TO PREPARE LEGAL PAPERS AND CORRESPONDENCE, SUCH AS SUMMONSES, COMPLAINTS, MOTIONS, AND SUBPOENAS. INSTRUCTION IN SHORTHAND, LEGAL TERMINOLOGY, PROCEDURES, AND DOCUMENTS, AND LAW LIBRARY RESEARCH IS INCLUDED.

--- DEGREES OFFERED: STUDENTS WHO MEET ALL OF THE CORE REQUIREMENT

COMPETENCIES WILL RECEIVE A DEGREE.

--- LENGTH OF PROGRAM: ALL OF THE SECRETARIAL PROGRAMS ARE 24 TO 47 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR BOOKS AND SUPPLIES WILL BE APPROXIMATELY \$155 FOR CLERK/TYPIST \$220 FOR LEGAL SECRETARIES AND \$185 FOR MEDICAL SECRETARIES.

- - - - - 25016 JACKSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

THE 'COURT REPORTING' PROGRAM PREPARES INDIVIDUALS TO RECORD BY MACHINE SHORTHAND THE EXAMINATION, TESTIMONY, JUDICIAL OPINIONS, JUDGE'S CHARGE TO JURY, JUDGEMENT OR SENTENCE OF COURT, OR OTHER PROCEEDINGS IN A COURT OF LAW. INSTRUCTION IN THE SPECIALIZED TERMINOLOGY AND PROCEDURES USED IN THE LEGAL, MEDICAL, AND INSURANCE FIELDS AND SKILLS FOR RECORDING TWO-, THREE- AND FOUR-WAY CONVERSATIONS IS INCLUDED.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED FOR EACH PROGRAM.

--- LENGTH OF PROGRAM: THE COURT REPORTING PROGRAM IS 80-88 WEEKS LONG. THE SECRETARIAL PROGRAM IS 9 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE ABOUT \$150 FOR EACH PROGRAM FOR BOOKS AND SUPPLIES EXCEPT FOR THE COURT REPORTING PROGRAM WHICH IS ABOUT \$500 FOR TOOLS AND EQUIPMENT.

- - - - - 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS AWARDED TO STUDENTS WHO SUCCESSFULLY COMPLETE EACH PROGRAM.

--- LENGTH OF PROGRAM: THE SECRETARIAL PROGRAM IS 42 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE ABOUT \$375 FOR THE SECRETARIAL PROGRAM.

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

THE 'LEGAL SECRETARIAL WITH SHORTHAND' PROGRAM TRAINS INDIVIDUALS TO PREPARE LEGAL PAPERS AND CORRESPONDENCE, SUCH AS SUMMONSES, COMPLAINTS, MOTIONS, AND SUBPOENAS. INSTRUCTION IN SHORTHAND, LEGAL TERMINOLOGY, PROCEDURES, AND DOCUMENTS, AND LAW LIBRARY RESEARCH IS INCLUDED.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED TO STUDENTS WHO COMPLETE EACH PROGRAM.

--- LENGTH OF PROGRAM: THE SECRETARIAL PROGRAM IS A 4-QUARTER PROGRAM, AND THE LEGAL SECRETARIAL PROGRAM IS 5 QUARTERS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR SECRETARY, MEDICAL SECRETARY, LEGAL SECRETARY, AND CLERK TYPIST INCLUDE ABOUT \$150 FOR BOOKS AND \$50 FOR SUPPLIES.

- - - - - 25019 MOORHEAD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

THE 'CLERK-TYPIST' PROGRAM PREPARES INDIVIDUALS TO USE TYPEWRITERS IN A VARIETY OF ACTIVITIES, INCLUDING CORRESPONDENCE AND COMPILING AND TYPING REPORTS, APPLICATION FORMS, SHIPPING TICKETS, AND OTHER DATA FROM CLERICAL RECORDS. INSTRUCTION IN FILING RECORDS AND REPORTS, POSTING INFORMATION TO RECORDS, SORTING AND DISTRIBUTING MAIL, ANSWERING TELEPHONES, AND COMPUTING WITH CALCULATING MACHINES IS INCLUDED.

THE 'LEGAL SECRETARIAL WITH SHORTHAND' PROGRAM TRAINS INDIVIDUALS TO PREPARE LEGAL PAPERS AND CORRESPONDENCE, SUCH AS SUMMONSES, COMPLAINTS, MOTIONS, AND SUBPOENAS. INSTRUCTION IN SHORTHAND, LEGAL TERMINOLOGY, PROCEDURES, AND DOCUMENTS, AND LAW LIBRARY RESEARCH IS INCLUDED.

THE 'MEDICAL SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO PERFORM MEDICAL SECRETARIAL DUTIES. INSTRUCTION IN SHORTHAND, WRITING REPORTS, SUCH AS CASE HISTORIES, UNDERSTANDING LEGAL AND INSURANCE FORMS, UTILIZING A KNOWLEDGE OF MEDICAL TERMINOLOGY AND HOSPITAL, CLINICAL, OR LABORATORY PROCEDURES ARE INCLUDED.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED IN THESE PROGRAMS.

--- LENGTH OF PROGRAM: THE CLERK/TYPIST, GENERAL AND LEGAL SECRETARY PROGRAMS ARE 9 MONTHS LONG. THE MEDICAL SECRETARY PROGRAM IS 11 MONTHS LONG.

- - - - - 25020 PINE TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CLERK-TYPIST' PROGRAM PREPARES INDIVIDUALS TO USE TYPEWRITERS IN A VARIETY OF ACTIVITIES, INCLUDING CORRESPONDENCE AND COMPILING AND TYPING REPORTS, APPLICATION FORMS, SHIPPING TICKETS, AND OTHER DATA FROM CLERICAL RECORDS. INSTRUCTION IN FILING RECORDS AND REPORTS, POSTING INFORMATION TO RECORDS, SORTING AND DISTRIBUTING MAIL, ANSWERING TELEPHONES, AND COMPUTING WITH CALCULATING MACHINES IS INCLUDED.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OR CERTIFICATE OF COMPLETION IS AWARDED TO GRADUATES OF THIS PROGRAM.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 9 MONTHS LONG.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CLERK-TYPIST' PROGRAM PREPARES INDIVIDUALS TO USE TYPEWRITERS IN A VARIETY OF ACTIVITIES, INCLUDING CORRESPONDENCE AND COMPILING AND TYPING REPORTS, APPLICATION FORMS, SHIPPING TICKETS, AND OTHER DATA FROM CLERICAL RECORDS. INSTRUCTION IN FILING RECORDS AND REPORTS, POSTING INFORMATION TO RECORDS, SORTING AND DISTRIBUTING MAIL, ANSWERING TELEPHONES, AND COMPUTING WITH CALCULATING MACHINES IS INCLUDED.

THE 'LEGAL SECRETARIAL WITH SHORTHAND' PROGRAM TRAINS INDIVIDUALS TO PREPARE LEGAL PAPERS AND CORRESPONDENCE, SUCH AS SUMMONSES, COMPLAINTS, MOTIONS, AND SUBPOENAS. INSTRUCTION IN SHORTHAND, LEGAL TERMINOLOGY, PROCEDURES, AND DOCUMENTS, AND LAW LIBRARY RESEARCH IS INCLUDED.

THE 'MEDICAL SECRETARIAL WITHOUT SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO PERFORM MEDICAL DUTIES UTILIZING A KNOWLEDGE OF MEDICAL TERMINOLOGY AND HOSPITAL, CLINICAL OR LABORATORY PROCEDURES, AND TRANSCRIPTION SKILLS. INSTRUCTION IN WRITING REPORTS, SUCH AS CASE HISTORIES AND INSURANCE REPORTS IS INCLUDED. IT DOES NOT REQUIRE SHORTHAND SKILLS.

THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM THESE ARE 11 MONTH PROGRAMS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR BOOKS, SUPPLIES AND EQUIPMENT WILL BE ABOUT \$228 FOR SECRETARIAL, \$180 FOR LEGAL, AND \$111 FOR MEDICAL.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED. THE 'WORD PROCESSING' PROGRAM PREPARES INDIVIDUALS TO EDIT AND PRODUCE WRITTEN COMMUNICATIONS. INSTRUCTION IN UTILIZING SPECIAL PURPOSE MACHINES TO CORRECT, FORMAT, AND PRINT INFORMATION IS INCLUDED.

THE 'LEGAL SECRETARIAL WITH SHORTHAND' PROGRAM TRAINS INDIVIDUALS TO PREPARE LEGAL PAPERS AND CORRESPONDENCE, SUCH AS SUMMONSES, COMPLAINTS, MOTIONS, AND SUBPOENAS. INSTRUCTION IN SHORTHAND, LEGAL TERMINOLOGY, PROCEDURES, AND DOCUMENTS, AND LAW LIBRARY RESEARCH IS INCLUDED.

THE 'MEDICAL SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO PERFORM MEDICAL SECRETARIAL DUTIES. INSTRUCTION IN SHORTHAND, WRITING REPORTS, SUCH AS CASE HISTORIES, UNDERSTANDING LEGAL AND INSURANCE FORMS, UTILIZING A KNOWLEDGE OF MEDICAL TERMINOLOGY AND HOSPITAL, CLINICAL, OR LABORATORY PROCEDURES ARE INCLUDED.

THE 'MEDICAL SECRETARIAL WITHOUT SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO PERFORM MEDICAL DUTIES UTILIZING A KNOWLEDGE OF MEDICAL TERMINOLOGY AND HOSPITAL, CLINICAL OR LABORATORY PROCEDURES, AND TRANSCRIPTION SKILLS. INSTRUCTION IN WRITING REPORTS, SUCH AS CASE HISTORIES AND INSURANCE REPORTS IS INCLUDED. IT DOES NOT REQUIRE SHORTHAND SKILLS.

--- DEGREES OFFERED: GRADUATES OF THE SECRETARIAL PROGRAMS RECEIVE DIPLOMAS.

--- LENGTH OF PROGRAM: ALL SECRETARIAL STUDIES PROGRAMS ARE 9 MONTHS LONG

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CLERK-TYPIST' PROGRAM PREPARES INDIVIDUALS TO USE TYPEWRITERS IN A VARIETY OF ACTIVITIES, INCLUDING CORRESPONDENCE AND COMPILING AND TYPING REPORTS, APPLICATION FORMS, SHIPPING TICKETS, AND OTHER DATA FROM CLERICAL RECORDS. INSTRUCTION IN FILING RECORDS AND REPORTS, POSTING INFORMATION TO RECORDS, SORTING AND DISTRIBUTING MAIL, ANSWERING TELEPHONES, AND COMPUTING WITH CALCULATING MACHINES IS INCLUDED.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE CLERK-TYPIST PROGRAM AND THE SECRETARIAL PROGRAM LAST 9 MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE: \$250 FOR THE CLERK-

TYPIST; \$275 FOR THE SECRETARIAL; AND \$270 FOR THE WORD PROCESSING OPTION. THESE COSTS INCLUDE BOOKS, SUPPLIES, EQUIPMENT AND OTHER COSTS.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CLERK-TYPIST' PROGRAM PREPARES INDIVIDUALS TO USE TYPEWRITERS IN A VARIETY OF ACTIVITIES, INCLUDING CORRESPONDENCE AND COMPILING AND TYPING REPORTS, APPLICATION FORMS, SHIPPING TICKETS, AND OTHER DATA FROM CLERICAL RECORDS. INSTRUCTION IN FILING RECORDS AND REPORTS, POSTING INFORMATION TO RECORDS, SORTING AND DISTRIBUTING MAIL, ANSWERING TELEPHONES, AND COMPUTING WITH CALCULATING MACHINES IS INCLUDED.

THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

THE 'LEGAL SECRETARIAL WITH SHORTHAND' PROGRAM TRAINS INDIVIDUALS TO PREPARE LEGAL PAPERS AND CORRESPONDENCE, SUCH AS SUMMONSES, COMPLAINTS, MOTIONS, AND SUBPOENAS. INSTRUCTION IN SHORTHAND, LEGAL TERMINOLOGY, PROCEDURES, AND DOCUMENTS, AND LAW LIBRARY RESEARCH IS INCLUDED.

THE 'MEDICAL SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO PERFORM MEDICAL SECRETARIAL DUTIES. INSTRUCTION IN SHORTHAND, WRITING REPORTS, SUCH AS CASE HISTORIES, UNDERSTANDING LEGAL AND INSURANCE FORMS, UTILIZING A KNOWLEDGE OF MEDICAL TERMINOLOGY AND HOSPITAL, CLINICAL, OR LABORATORY PROCEDURES ARE INCLUDED.

--- DEGREES OFFERED: DIPLOMAS ARE AWARDED.

--- LENGTH OF PROGRAM: THE CLERK-TYPIST PROGRAM IS 6 MONTHS LONG.

THE GENERAL, LEGAL, AND MEDICAL SECRETARIAL PROGRAMS ARE 9 MONTHS LONG.

- - - - - 25026 STAPLES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CLERK-TYPIST' PROGRAM PREPARES INDIVIDUALS TO USE TYPEWRITERS IN A VARIETY OF ACTIVITIES, INCLUDING CORRESPONDENCE AND COMPILING AND TYPING REPORTS, APPLICATION FORMS, SHIPPING TICKETS, AND OTHER DATA FROM CLERICAL RECORDS. INSTRUCTION IN FILING RECORDS AND REPORTS, POSTING INFORMATION TO RECORDS, SORTING AND DISTRIBUTING MAIL, ANSWERING TELEPHONES, AND COMPUTING WITH CALCULATING MACHINES IS INCLUDED.

--- LENGTH OF PROGRAM: THE CLERK-TYPIST PROGRAM IS ONE YEAR LONG.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

--- DEGREES OFFERED: DIPLOMAS OF RECOGNITION ARE OFFERED IN THIS PROGRAM.

--- LENGTH OF PROGRAM: THIS PROGRAM IS FROM 6 TO 23 MONTHS IN LENGTH.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR BOOKS AND SUPPLIES ARE \$230.

- - - - - 25028 THIEF RIVER FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CLERK-TYPIST' PROGRAM PREPARES INDIVIDUALS TO USE TYPEWRITERS IN A VARIETY OF ACTIVITIES, INCLUDING CORRESPONDENCE AND COMPILING AND TYPING REPORTS, APPLICATION FORMS,

SHIPPING TICKETS, AND OTHER DATA FROM CLERICAL RECORDS. INSTRUCTION IN FILING RECORDS AND REPORTS, POSTING INFORMATION TO RECORDS, SORTING AND DISTRIBUTING MAIL, ANSWERING TELEPHONES, AND COMPUTING WITH CALCULATING MACHINES IS INCLUDED.

THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

THE 'LEGAL SECRETARIAL WITH SHORTHAND' PROGRAM TRAINS INDIVIDUALS TO PREPARE LEGAL PAPERS AND CORRESPONDENCE, SUCH AS SUMMONSES, COMPLAINTS, MOTIONS, AND SUBPOENAS. INSTRUCTION IN SHORTHAND, LEGAL TERMINOLOGY, PROCEDURES, AND DOCUMENTS, AND LAW LIBRARY RESEARCH IS INCLUDED.

THE 'MEDICAL SECRETARIAL OCCUPATIONS WITHOUT SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO PERFORM MEDICAL DUTIES UTILIZING A KNOWLEDGE OF MEDICAL TERMINOLOGY AND HOSPITAL, CLINICAL OR LABORATORY PROCEDURES, AND TRANSCRIPTION SKILLS. INSTRUCTION IN WRITING REPORTS, SUCH AS CASE HISTORIES AND INSURANCE REPORTS IS INCLUDED. IT DOES NOT REQUIRE SHORTHAND SKILLS.

--- DEGREES OFFERED: DEGREES OF OCCUPATIONAL PROFICIENCY ARE AWARDED.

--- LENGTH OF PROGRAM: THE MEDICAL SECRETARIAL PROGRAM TAKES 40 WEEKS. THE OTHER PROGRAMS LAST 36 WEEKS.

- - - - - 25029 WADENA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

THE 'CLERK-TYPIST' PROGRAM PREPARES INDIVIDUALS TO USE TYPEWRITERS IN A VARIETY OF ACTIVITIES, INCLUDING CORRESPONDENCE AND COMPILING AND TYPING REPORTS, APPLICATION FORMS, SHIPPING TICKETS, AND OTHER DATA FROM CLERICAL RECORDS. INSTRUCTION IN FILING RECORDS AND REPORTS, POSTING INFORMATION TO RECORDS, SORTING AND DISTRIBUTING MAIL, ANSWERING TELEPHONES, AND COMPUTING WITH CALCULATING MACHINES IS INCLUDED.

--- DEGREES OFFERED: DIPLOMAS ARE AWARDED.

--- LENGTH OF PROGRAM: EACH PROGRAM USUALLY TAKES 10-1/2 MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE: \$256 FOR THE SECRETARIAL PROGRAM. THIS WILL INCLUDE BOOKS AND SUPPLIES.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

THE 'CLERK-TYPIST' PROGRAM PREPARES INDIVIDUALS TO USE TYPEWRITERS IN A VARIETY OF ACTIVITIES, INCLUDING CORRESPONDENCE AND COMPILING AND TYPING REPORTS, APPLICATION FORMS, SHIPPING TICKETS, AND OTHER DATA FROM CLERICAL RECORDS. INSTRUCTION IN FILING RECORDS AND REPORTS, POSTING INFORMATION TO RECORDS, SORTING AND DISTRIBUTING MAIL, ANSWERING TELEPHONES, AND COMPUTING WITH CALCULATING MACHINES IS INCLUDED.

THE 'MEDICAL SECRETARIAL WITHOUT SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO PERFORM MEDICAL DUTIES UTILIZING A KNOWLEDGE OF MEDICAL TERMINOLOGY AND

HOSPITAL, CLINICAL OR LABORATORY PROCEDURES, AND TRANSCRIPTION SKILLS. INSTRUCTION IN WRITING REPORTS, SUCH AS CASE HISTORIES AND INSURANCE REPORTS IS INCLUDED. IT DOES NOT REQUIRE SHORTHAND SKILLS.

THE 'LEGAL SECRETARIAL WITH SHORTHAND' PROGRAM TRAINS INDIVIDUALS TO PREPARE LEGAL PAPERS AND CORRESPONDENCE, SUCH AS SUMMONSES, COMPLAINTS, MOTIONS, AND SUBPOENAS. INSTRUCTION IN SHORTHAND, LEGAL TERMINOLOGY, PROCEDURES, AND DOCUMENTS, AND LAW LIBRARY RESEARCH IS INCLUDED.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OR A CERTIFICATE IS AWARDED.

--- LENGTH OF PROGRAM: THE CLERK PROGRAM AND THE SECRETARIAL PROGRAMS ARE 9 MONTHS LONG. THE MEDICAL AND LEGAL SECRETARY PROGRAMS EACH TAKE 10 MONTHS.

--- SPECIAL COSTS: BOOKS WILL COST ABOUT \$230 (ALL USABLE BOOKS ARE BOUGHT BACK AT 70 PERCENT OF PAID PRICE).

- - - - - 25031 WINONA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

THE 'LEGAL SECRETARIAL WITH SHORTHAND' PROGRAM TRAINS INDIVIDUALS TO PREPARE LEGAL PAPERS AND CORRESPONDENCE, SUCH AS SUMMONSES, COMPLAINTS, MOTIONS, AND SUBPOENAS. INSTRUCTION IN SHORTHAND, LEGAL TERMINOLOGY, PROCEDURES, AND DOCUMENTS, AND LAW LIBRARY RESEARCH IS INCLUDED.

THE 'MEDICAL SECRETARIAL WITH SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO PERFORM MEDICAL SECRETARIAL DUTIES. INSTRUCTION IN SHORTHAND, WRITING REPORTS, SUCH AS CASE HISTORIES, UNDERSTANDING LEGAL AND INSURANCE FORMS, UTILIZING A KNOWLEDGE OF MEDICAL TERMINOLOGY AND HOSPITAL, CLINICAL, OR LABORATORY PROCEDURES ARE INCLUDED.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS AWARDED TO STUDENTS WHO SUCCESSFULLY COMPLETE EACH PROGRAM.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE ALL 9 MONTHS LONG.

--- SPECIAL COSTS: BOOKS AND SUPPLIES WILL COST ABOUT \$190 FOR GENERAL SECRETARY.

- - - - - 25032 EAST GRAND FORKS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CLERK-TYPIST' PROGRAM PREPARES INDIVIDUALS TO USE TYPEWRITERS IN A VARIETY OF ACTIVITIES, INCLUDING CORRESPONDENCE AND COMPILING AND TYPING REPORTS, APPLICATION FORMS, SHIPPING TICKETS, AND OTHER DATA FROM CLERICAL RECORDS. INSTRUCTION IN FILING RECORDS AND REPORTS, POSTING INFORMATION TO RECORDS, SORTING AND DISTRIBUTING MAIL, ANSWERING TELEPHONES, AND COMPUTING WITH CALCULATING MACHINES IS INCLUDED.

THE 'MEDICAL SECRETARIAL WITHOUT SHORTHAND' PROGRAM PREPARES INDIVIDUALS TO PERFORM MEDICAL DUTIES UTILIZING A KNOWLEDGE OF MEDICAL TERMINOLOGY AND HOSPITAL, CLINICAL OR LABORATORY PROCEDURES, AND TRANSCRIPTION SKILLS. INSTRUCTION IN WRITING REPORTS, SUCH AS CASE HISTORIES AND INSURANCE REPORTS IS INCLUDED. IT DOES NOT REQUIRE SHORTHAND SKILLS.

--- DEGREES OFFERED: DIPLOMAS OF RECOGNITION ARE OFFERED IN BOTH OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THE PROGRAMS RANGE FROM 26 TO 36 WEEKS.

- - - - - 25033 RED WING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL WITH SHORTHAND' PROGRAM

PREPARES INDIVIDUALS TO TAKE SHORTHAND AND TO CARRY OUT ADMINISTRATIVE AND GENERAL OFFICE DUTIES IN A SUPPORT CAPACITY. INSTRUCTION IN SCHEDULING APPOINTMENTS, GIVING INFORMATION TO CALLERS, TAKING AND TRANSCRIBING DICTATION, AND RELIEVING OFFICIALS OF MINOR ADMINISTRATIVE AND BUSINESS DETAILS IS INCLUDED.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED TO STUDENTS WHO COMPLETE THE PROGRAM.

--- LENGTH OF PROGRAM: THE SECRETARIAL PROGRAM IS 9 MONTHS LONG.

--- SPECIAL COSTS: BOOKS AND SUPPLIES WILL COST ABOUT \$80.

- - - - - 26070 BEMIDJI STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'OFFICE ADMINISTRATION', NON-TEACHING MAJOR REQUIRES THE COMPLETION OF 75 QUARTER CREDITS INCLUDING A 31 CREDIT BASIC BUSINESS EDUCATION CORE, 8 COURSES (30 CREDITS) OF REQUIRED OFFICE ADMINISTRATION COURSES, AND 14 CREDITS OF GUIDED ELECTIVES FROM BUSINESS, ECONOMICS, PSYCHOLOGY OF SOCIETY, TYPING, SHORTHAND, CALCULATING MACHINE, AND TRANSCRIPTION ARE SOME OF THE REQUIRED COURSES. SECRETARIAL AND MEDICAL SECRETARIAL PROGRAMS ARE ALSO AVAILABLE.

--- DEGREES OFFERED: AN OCCUPATIONAL DEGREE AND A BACHELOR OF ARTS DEGREE ARE OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS FROM LESS THAN ONE YEAR TO A BACCALAUREATE PROGRAM.

- - - - - 26071 MANKATO STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL ADMINISTRATION' PROGRAM HAS BEEN DESIGNED TO ALLOW THE STUDENT TO PREPARE FOR A CAREER AS AN EXECUTIVE ASSISTANT, GENERAL SECRETARY, LEGAL SECRETARY, OR MEDICAL SECRETARY.

--- DEGREES OFFERED: AN ASSOCIATE OF ARTS DEGREE IS OFFERED WITH CONCENTRATIONS IN GENERAL, LEGAL, AND MEDICAL SECRETARIAL STUDIES. A CERTIFICATE IS ALSO OFFERED.

--- LENGTH OF PROGRAM: THE A.S. PROGRAM IS TWO YEARS LONG; THE CERTIFICATE PROGRAM IS ONE YEAR LONG.

- - - - - 26073 ST. CLOUD STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS EDUCATION AND OFFICE ADMINISTRATION' PROGRAM PREPARES STUDENTS FOR A CAREER AS A BUSINESS TEACHER OR TO ENTER MAJOR OFFICE OCCUPATIONS. IN THE FOUR-YEAR OFFICE ADMINISTRATION PROGRAM, STUDENTS MAY CHOOSE RECORDS MANAGEMENT, OFFICE MANAGEMENT OR SECRETARIAL ADMINISTRATION. CONCEPTS AND SKILLS IN OFFICE AUTOMATION ARE INCLUDED. TWO-YEAR SECRETARIAL SCIENCE STUDENTS GAIN SKILLS FOR ENTRY LEVEL OFFICE JOBS. BUSINESS EDUCATION MAJORS CAN SPECIALIZE IN ACCOUNTING, BASIC BUSINESS, CLERICAL OR SECRETARIAL, ANY COMBINATION OF THESE OR SELECT A COMPREHENSIVE MAJOR.

--- DEGREES OFFERED: THE BACHELOR OF SCIENCE DEGREE IS AWARDED TO FOUR-YEAR GRADUATES AND THE ASSOCIATE IN SCIENCE DEGREE IS EARNED BY GRADUATES OF THE TWO-YEAR PROGRAM.

- - - - - 26074 WINONA STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 90 CREDIT PROGRAM IN 'OFFICE

ADMINISTRATION' IS ONE OF FOUR OPTIONS TO THE BACHELOR OF SCIENCE MAJOR IN BUSINESS EDUCATION; HOWEVER, THIS PROGRAM IS DESIGNED FOR THE STUDENT WHO DOES NOT DESIRE TEACHING LICENSURE IN BUSINESS EDUCATION BUT DOES DESIRE A CONCENTRATION IN OFFICE ADMINISTRATION (TYPING-BOOKKEEPING-OFFICE MANAGEMENT.) WINONA STATE OFFERS A 2-YEAR 'EXECUTIVE SECRETARIAL' PROGRAM. THERE IS ALSO A 1-YEAR STENOGRAPHIC PROGRAM. THESE PROGRAMS ARE DESIGNED TO PREPARE STUDENTS FOR EMPLOYMENT IN THESE FIELDS.

--- DEGREES OFFERED: STUDENTS WHO COMPLETE A 2-YEAR PROGRAM MAY OBTAIN AN ASSOCIATE OF ARTS DEGREE IN THE FIELD. A BACHELOR OF SCIENCE IN OFFICE ADMINISTRATION IS OFFERED.

- - - - - 26175 SOUTHWEST STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'OFFICE ADMINISTRATION' PROGRAM IS DESIGNED TO PREPARE STUDENTS WITH THE NECESSARY OFFICE SKILLS AND SUPERVISORY ABILITY REQUIRED TO BECOME EXECUTIVE OR ADMINISTRATIVE ASSISTANTS.

--- DEGREES OFFERED: AN ASSOCIATE OF SCIENCE DEGREE AND A BACHELOR OF SCIENCE DEGREE IN SECRETARIAL ADMINISTRATION ARE OFFERED.

- - - - - 27139 AUSTIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THREE SECRETARIAL PROGRAMS ARE OFFERED: 'CLERICAL', 'SECRETARIAL', AND 'LEGAL SECRETARIAL'. THE PROGRAMS ARE DESIGNED TO PROVIDE STUDENTS WITH THE KNOWLEDGE AND SKILLS NECESSARY TO ENTER CAREERS IN APPROPRIATE SECRETARIAL FIELDS AND TO ADVANCE IN THOSE FIELDS. THESE ARE COMBINED PROGRAMS WITH THE AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE. STUDENTS APPLY DIRECTLY TO THE AUSTIN A.V.T.I.

--- DEGREES OFFERED: EACH PROGRAM OFFERS A VOCATIONAL CERTIFICATE AFTER THE FIRST YEAR OF STUDY AND AN ASSOCIATE OF APPLIED SCIENCE DEGREE AFTER THE SECOND YEAR.

--- LENGTH OF PROGRAM: STUDENTS MAY SELECT EITHER A ONE OR TWO YEAR COURSE OF STUDY IN EACH PROGRAM.

- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'GENERAL SECRETARIAL' PROGRAM IS DESIGNED FOR STUDENTS WHO ARE INTERESTED IN THIS AREA. THE 'CLERICAL' PROGRAM IS DESIGNED FOR STUDENTS WHO ARE INTERESTED IN THE CLERICAL FIELD. THE 'LEGAL OFFICE' AND 'MEDICAL OFFICE' PROGRAMS ARE DESIGNED FOR STUDENTS WHO WISH TO ENTER EITHER LEGAL OR MEDICAL OFFICE WORK.

--- DEGREES OFFERED: A VOCATIONAL CERTIFICATE IS OFFERED IN EACH PROGRAM.

--- LENGTH OF PROGRAM: EACH OF THESE PROGRAMS IS 9 MONTHS LONG.

- - - - - 27143 HIBBING COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: ONE YEAR 'STENOGRAPHIC' AND 'CLERICAL' PROGRAMS ARE OFFERED. TWO YEAR PROGRAMS ARE OFFERED IN THE 'GENERAL SECRETARIAL', 'CLERICAL SECRETARIAL'. OPTIONS IN 'LEGAL SECRETARIAL' AND 'MEDICAL SECRETARIAL' FIELDS ARE AVAILABLE. THESE PROGRAMS ARE DESIGNED TO TRAIN STUDENTS FOR CAREERS IN OFFICE WORK.

--- DEGREES OFFERED: THE ONE YEAR STENOGRAPHIC AND CLERICAL PROGRAMS OFFER VOCATIONAL CERTIFICATES. THE GENERAL SECRETARIAL, CLERICAL, MEDICAL AND LEGAL SECRETARIAL PROGRAMS OFFER ASSOCIATE DEGREES.

--- LENGTH OF PROGRAM: THE SECRETARIAL STUDIES PROGRAMS ARE 1 OR 2 YEARS LONG AS INDICATED.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 27144 ITASCA COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'CLERICAL', 'BEGINNING SECRETARY', 'ADVANCED SECRETARY', AND 'MEDICAL SECRETARY' PROGRAMS ARE DESIGNED TO TRAIN PEOPLE FOR OFFICE WORK IN BUSINESS AND INDUSTRY. STUDENTS TAKE COURSES IN TYPING, MATH, BUSINESS COMMUNICATIONS, ACCOUNTING, AND OFFICE PROCEDURES AS WELL AS COURSES RELATED TO THEIR SPECIAL AREA OF STUDY. THEY MAY ALSO PARTICIPATE IN AN INTERNSHIP.

--- DEGREES OFFERED: VOCATIONAL CERTIFICATES ARE GRANTED TO STUDENTS WHO SUCCESSFULLY COMPLETE THE REQUIREMENTS OF ONE OF THE OFFICE EDUCATION PROGRAMS.

--- LENGTH OF PROGRAM: THE OFFICE EDUCATION PROGRAMS ARE 9 MONTHS LONG.

- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'CLERICAL' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR EMPLOYMENT IN BUSINESS OFFICES AS RECEPTIONISTS, CLERK-TYPISTS, AND MACHINE OPERATORS. STUDENTS WHO ENTER THIS PROGRAM MUST HAVE ONE YEAR OF TYPING EXPERIENCE.

--- DEGREES OFFERED: A CERTIFICATE OF ATTENDANCE OR A CERTIFICATE OF COMPLETION IS OFFERED.

--- LENGTH OF PROGRAM: THE CLERICAL PROGRAM IS 9 MONTHS LONG.

- - - - - 27147 VERMILION COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL' PROGRAM IS DESIGNED FOR STUDENTS WHO WISH TO ENTER OFFICE WORK AND TAKE AND TRANSCRIBE SHORTHAND. THE 'CLERICAL' PROGRAM IS DESIGNED FOR STUDENTS WHO WISH TO ENTER OFFICE WORK THAT DOES NOT REQUIRE SHORTHAND. SOME COURSES INCLUDED IN BOTH OF THESE PROGRAMS ARE: VOCATIONAL ACCOUNTING, OFFICE PROCEDURES, DATA PROCESSING, BUSINESS COMMUNICATIONS, VOICE WRITING AND TYPING. 'LEGAL SECRETARIAL' AND 'MEDICAL CLERICAL' OPTIONS ARE AVAILABLE.

--- DEGREES OFFERED: A CERTIFICATE IS OFFERED IN EACH PROGRAM.

--- LENGTH OF PROGRAM: BOTH THE SECRETARIAL AND CLERICAL PROGRAMS ARE 1 YEAR LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE BOOKS AND MATERIALS.

- - - - - 27148 ROCHESTER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'GENERAL SECRETARIAL' ONE YEAR PROGRAM IS DESIGNED FOR STUDENTS WHO WISH TO CONCENTRATE THEIR ATTENTION ON THE MOST ESSENTIAL REQUIREMENTS OF STENOGRAPHY. THE 'GENERAL SECRETARIAL' TWO YEAR PROGRAM DEVELOPS THE SKILLS, KNOWLEDGE, AND ATTITUDES SOUGHT BY MODERN BUSINESS EMPLOYERS. A 'MEDICAL SECRETARIAL WITHOUT SHORTHAND' OR 'WITH SHORTHAND', A 'MEDICAL SECRETARIAL' TWO YEAR PROGRAM, AND A 'GENERAL OFFICE EDUCATION' PROGRAM ARE ALSO OFFERED.

--- DEGREES OFFERED: A COMMUNITY COLLEGE VOCATIONAL CERTIFICATE AND AN ASSOCIATE IN APPLIED SCIENCE DEGREE ARE OFFERED IN EACH PROGRAM, HOWEVER, THE GENERAL OFFICE EDUCATION PROGRAM OFFERS THE VOCATIONAL CERTIFICATE.

--- LENGTH OF PROGRAM: THE SECRETARIAL STUDIES PROGRAMS ARE ALL EITHER ONE OR TWO YEARS LONG.

- - - - - 27150 MESABI COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: A 'CLERICAL' PROGRAM AND A 'SECRETARIAL' PROGRAM ARE OFFERED AT MESABI. THE SECRETARIAL CURRICULUM PREPARES STUDENTS FOR SECRETARIAL CAREERS. THE CLERICAL PROGRAM IS DESIGNED FOR THE GENERAL CLERICAL OFFICE WORKER. STUDENTS IN BOTH PROGRAMS STUDY TYPING, BUSINESS MACHINES, FILING, BUSINESS MATH, LAW, COMMUNICATION, DATA PROCESSING, WORD PROCESSING, OFFICE PROCEDURES, AND ACCOUNTING. CLERICAL

STUDENTS ALSO STUDY MACHINE TRANSCRIPTION WHILE SECRETARIAL STUDENTS STUDY SHORTHAND. LEGAL AND MEDICAL SECRETARIAL OPTIONS HAVE BEEN ADDED TO THE SOPHOMORE YEAR FOR STUDENTS IN THE TWO-YEAR SECRETARIAL PROGRAM.

--- DEGREES OFFERED: A VOCATIONAL CERTIFICATE IS OFFERED IN THE ONE YEAR CLERICAL AND SECRETARIAL PROGRAMS. STUDENTS IN THE TWO YEAR SECRETARIAL PROGRAM ARE AWARDED THE ASSOCIATE IN APPLIED SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THE CLERICAL PROGRAM IS 1 YEAR LONG. STUDENTS MAY CHOOSE EITHER A 1 YEAR OR A 2 YEAR SECRETARIAL PROGRAM.

- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE TWO YEAR 'SECRETARIAL' PROGRAM OFFERS OPTIONS IN GENERAL, LEGAL, MEDICAL, OFFICE MANAGEMENT, AND SECRETARIAL STUDIES. THESE PROGRAMS PREPARE STUDENTS TO WORK IN BUSINESS, LAW, AND MEDICAL OFFICES THROUGH A COMBINATION OF SECRETARIAL TRAINING AND GENERAL EDUCATION.

--- DEGREES OFFERED: GRADUATES OF THE 2 YEAR SECRETARIAL PROGRAM RECEIVE AN ASSOCIATE IN APPLIED SCIENCE DEGREE.

--- LENGTH OF PROGRAM: ALL SECRETARIAL PROGRAMS ARE 2 YEARS LONG.

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: NORTH HENNEPIN OFFERS A ONE-YEAR 'GENERAL OFFICE' PROGRAM AND TWO-YEAR OPTIONS IN 'EXECUTIVE OFFICE', 'LEGAL OFFICE', 'MEDICAL OFFICE', AND 'ADMINISTRATIVE ASSISTANT' STUDIES. COMMON REQUIREMENTS INCLUDE: TYPING, SHORTHAND, FILING, ACCOUNTING, HUMAN RELATIONS, WRITING, DATA PROCESSING, AND MATH. STUDENTS IN THE SPECIALIZED TWO YEAR PROGRAMS RECEIVE INTENSIVE TRAINING IN THEIR FIELD OF INTEREST DURING THE SECOND YEAR OF STUDY.

--- DEGREES OFFERED: STUDENTS WHO COMPLETE THE ONE YEAR PROGRAM RECEIVE AN OFFICE CERTIFICATE. THOSE IN THE EXECUTIVE, LEGAL, ADMINISTRATIVE, AND MEDICAL OFFICE OPTIONS ARE ELIGIBLE FOR AN ASSOCIATE IN APPLIED SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THE CERTIFICATE PROGRAM IS 1 YEAR LONG. THE DEGREE PROGRAMS REQUIRE 2 YEARS OF STUDY.

- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL SCIENCE' PROGRAM DEVELOPS THE SKILLS, SELF-CONFIDENCE, AND MATURITY OF PERSONS WHO ARE SEEKING CAREERS IN SECRETARIAL OR CLERICAL POSITIONS. STUDENTS ARE TRAINED IN SHORTHAND, TYPEWRITING, FILING, OFFICE MACHINE OPERATION, RECORDS MANAGEMENT, BUSINESS CORRESPONDENCE AND POSITIVE OFFICE RELATIONS. THEY ALSO COMPLETE COURSES IN THE BEHAVIORAL AND SOCIAL SCIENCES, ENGLISH, HUMANITIES, MATH, SCIENCE, AND PHYSICAL AND PUBLIC HEALTH.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE ASSOCIATE DEGREE PROGRAM REQUIRES THE COMPLETION OF 90 QUARTER CREDITS (2 YEARS) OF COLLEGE.

- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'CLERICAL' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR IMMEDIATE EMPLOYMENT AS CLERKS IN POSITIONS NOT REQUIRING SHORTHAND. THE 'SECRETARIAL' PROGRAM PREPARES PEOPLE TO ENTER OFFICE CAREERS WHICH REQUIRE SHORTHAND. BOTH PROGRAMS INCLUDE COURSES IN TYPING, OFFICE MACHINES, BASIC ACCOUNTING, DATA PROCESSING, BUSINESS WRITING, OFFICE PROCEDURES, MATHEMATICS AND WORD PROCESSING.

--- DEGREES OFFERED: STUDENTS WHO COMPLETE THESE PROGRAMS EARN A

CERTIFICATE OF COMPETENCY OR A CERTIFICATE OF ATTENDANCE. BY TAKING ADDITIONAL COURSES, STUDENTS MAY ALSO EARN AN ASSOCIATE DEGREE.

--- LENGTH OF PROGRAM: THE CERTIFICATE PROGRAMS ARE 9 MONTHS LONG. THE ASSOCIATE DEGREE PROGRAM REQUIRES AT LEAST 2 YEARS OF COURSE WORK.

- - - - - 27156 NORMANDALE COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'OFFICE INFORMATION SYSTEMS' PROGRAM PROVIDES STUDENTS WITH A GENERAL SECRETARIAL BACKGROUND. STUDENTS MAY CHOOSE EITHER 'OPTION I (WITH SHORTHAND)' OR 'OPTION II (WITHOUT SHORTHAND)'. THE ASSOCIATE DEGREE PROGRAM PROVIDES STUDENTS WITH MORE SPECIALIZED SECRETARIAL TRAINING. STUDENTS IN THIS PROGRAM MAY CHOOSE A GENERAL SECRETARIAL CURRICULUM OR MAY SPECIALIZE IN THE LEGAL, MEDICAL OR EXECUTIVE AREAS. SPECIALIZED COURSES ARE OFFERED IN WORD PROCESSING AND AUTOMATED OFFICE SYSTEMS.

--- DEGREES OFFERED: A CERTIFICATE OR AN ASSOCIATE IN APPLIED SCIENCE IS OFFERED.

--- LENGTH OF PROGRAM: THE CERTIFICATE PROGRAM IS ONE YEAR LONG. THE ASSOCIATE DEGREE PROGRAM TAKES 2 YEARS TO COMPLETE.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL' PROGRAMS ARE DESIGNED TO PREPARE STUDENTS FOR WORK IN A VARIETY OF OFFICE SETTINGS. STUDENTS MAY CHOOSE FROM PROGRAMS IN 'EXECUTIVE SECRETARIAL', 'LEGAL SECRETARIAL', AND 'MEDICAL SECRETARIAL' STUDIES.

--- DEGREES OFFERED: A VOCATIONAL CERTIFICATE AND AN ASSOCIATE DEGREE ARE OFFERED IN EACH AREA.

--- LENGTH OF PROGRAM: THE CERTIFICATE PROGRAM IS ONE YEAR LONG WHILE THE ASSOCIATE DEGREE REQUIRES TWO YEARS OF STUDY.

- - - - - 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'COURT AND CONFERENCE REPORTING' PROGRAM PREPARES STUDENTS FOR CAREERS REQUIRING SHORTHAND REPORTING. TYPICAL CAREERS INCLUDE: COURT REPORTERS, HEARING REPORTERS, LEGISLATIVE REPORTERS, AND GENERAL OR FREE LANCE REPORTERS. STUDENTS LEARN TO OPERATE THE STENOGRAPH MACHINE AND TRANSCRIBE NOTES. THEY ALSO TAKE GENERAL EDUCATION COURSES AND COURSES IN VOCABULARY AND COMMUNICATION SKILLS. THE 'SECRETARIAL' MAJOR OFFERS OPTIONS IN EXECUTIVE, LEGAL, MEDICAL, AIRLINE AND TRAVEL, DATA PROCESSING, WORD PROCESSING AND GENERAL SECRETARIAL ADMINISTRATION. THIS PROGRAM DEVELOPS SECRETARIAL SKILLS AND PROVIDES A BACKGROUND IN BUSINESS THEORY AND GENERAL EDUCATION.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 81005 UNIVERSITY OF MINNESOTA-WASECA TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'AGRICULTURAL OFFICE MANAGEMENT' MAJOR IS DESIGNED TO PREPARE STUDENTS TO WORK IN OFFICES IN AGRICULTURE RELATED BUSINESSES AND SERVICES AT THE MID-MANAGEMENT LEVEL. STUDENTS LEARN ALL BASIC OFFICE FUNCTIONS, SUCH AS KEYBOARDING, WORD PROCESSING, USE OF THE MICROCOMPUTER AND RECORDS MANAGEMENT. THEY ALSO TAKE AGRICULTURE RELATED COURSES SUCH AS TECHNICAL TYPING, AGRICULTURAL TERMINOLOGY, ANIMAL AND SOIL SCIENCE, AND CROP PRODUCTION.

--- DEGREES OFFERED: GRADUATES OF THIS PROGRAM RECEIVE ASSOCIATE IN APPLIED SCIENCE DEGREES.

--- LENGTH OF PROGRAM: THIS IS A 2-YEAR PROGRAM.

- - - - - 82008 DULUTH BUSINESS UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS MANAGEMENT' PROGRAM PROVIDES STUDENTS WITH A GENERAL BUSINESS BACKGROUND IN THE AREAS OF MARKETING, MANAGEMENT, SALES, AND ACCOUNTING. COURSES INCLUDE ACCOUNTING, BUSINESS MATH, BUSINESS LAW, ENGLISH, TYPING, OFFICE MACHINES, AND SMALL BUSINESS MANAGEMENT. THERE ARE 11 (ELEVEN) SECRETARIAL STUDIES PROGRAMS OFFERED. THEY ARE: EXECUTIVE SECRETARIAL, SECRETARIAL, LEGAL SECRETARY, MEDICAL SECRETARY, LEGAL SECRETARY-TRANSCRIBER, MEDICAL RECEPTIONIST-TRANSCRIBER, STENOGRAPHIC, GENERAL OFFICE-BOOKKEEPER, INTENSIVE MEDICAL SECRETARIAL, INTENSIVE LEGAL SECRETARY AND RECEPTIONIST-TYPIST. AREAS OF STUDY MAY INCLUDE GREGG SHORTHAND, TYPING, WORD PROCESSING, ENGLISH, BUSINESS MATH, AND SPECIALIZED COURSES IN THE LEGAL AND MEDICAL AREAS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE EXECUTIVE SECRETARIAL IS 60 WEEKS; BUSINESS MANAGEMENT, SECRETARIAL, LEGAL SECRETARY, AND MEDICAL SECRETARY ARE 48 WEEKS; LEGAL SECRETARY-TRANSCRIBER, MEDICAL RECEPTIONIST-TRANSCRIBER, STENOGRAPHIC, AND GENERAL OFFICE-BOOKKEEPER ARE 36 WEEKS; AND INTENSIVE MEDICAL SECRETARIAL, INTENSIVE LEGAL SECRETARY AND RECEPTIONIST-TYPIST ARE 24 WEEKS LONG.

- - - - - 82014 GLOBE COLLEGE OF BUSINESS

--- OBJECTIVES OF THE PROGRAM: FIVE AREAS OF SECRETARIAL TRAINING ARE OFFERED: 'OFFICE ASSISTANT', 'ADMINISTRATIVE ASSISTANT', 'GENERAL SECRETARIAL', 'LEGAL SECRETARY', AND 'ADVANCED LEGAL SECRETARY'. COURSE WORK MAY INCLUDE: TYPING, SHORTHAND, SECRETARIAL PROCEDURES, BUSINESS COMMUNICATIONS OFFICE MACHINES, MACHINE TRANSCRIPTION, WORD PROCESSING AND DATA ENTRY.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED UPON SUCCESSFUL COMPLETION.

--- LENGTH OF PROGRAM: PROGRAM LENGTHS ARE AS FOLLOWS: GENERAL SECRETARIAL--4 QUARTERS, LEGAL SECRETARIAL--5 QUARTERS, ADMINISTRATIVE ASSISTANT--6 QUARTERS, OFFICE ASSISTANT--4 QUARTERS, ADVANCED LEGAL SECRETARY--8 QUARTERS. ALL SECRETARIAL STUDIES INCLUDE 2 QUARTERS OF WORD PROCESSING.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 82021 MCCONNELL SCHOOL

--- OBJECTIVES OF THE PROGRAM: THE PROGRAM TRAINS STUDENTS FOR CAREERS IN THE 'TRAVEL FIELD' AS TICKET, TRAVEL OR RESERVATION AGENTS. COURSES INCLUDE: AIRLINE FARES AND TICKETS, RESERVATIONS AND PASSENGER SERVICES, TRAVEL AGENCY PROCEDURES, AIRLINE THEORY, TYPING, AND TRAVEL PLANNING.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED UPON COMPLETION OF COURSE REQUIREMENTS.

--- LENGTH OF PROGRAM: THE SCHOOL OFFERS BOTH A 12-WEEK (300 HOURS) AND A 28-WEEK (700 HOURS) PROGRAM.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 82023 MINNEAPOLIS BUSINESS COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE SECRETARIAL SCIENCE DEPARTMENT OFFERS THE STUDENT TRAINING IN 'EXECUTIVE SECRETARIAL', 'PRIVATE SECRETARIAL', 'LEGAL SECRETARIAL', AND 'MEDICAL SECRETARIAL' CAREER AREAS. COMMON COURSES OF STUDY INCLUDE: SHORTHAND/DICTATION, TYPEWRITING, VOCABULARY DEVELOPMENT, RECORDS MANAGEMENT, WORD PROCESSING AND PERSONAL AND PROFESSIONAL DEVELOPMENT COURSES. NO LIBERAL ARTS COURSES ARE REQUIRED.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED UPON SUCCESSFUL COMPLETION OF EACH OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: PROGRAM LENGTHS ARE AS FOLLOWS: EXECUTIVE SECRETARIAL, LEGAL SECRETARIAL, AND MEDICAL SECRETARIAL--10 TO 12 MONTHS; LEGAL AND MEDICAL SPECIALIZATIONS ARE SIX WEEKS LONG. --- SPECIAL COSTS: THE COST OF BOOKS AND MATERIALS IS NOT INCLUDED IN THE TUITION.

- - - - - 82025 MINNESOTA INSTITUTE OF MEDICAL AND DENTAL ASSISTANTS

--- OBJECTIVE OF THE PROGRAM: THE 'MEDICAL SECRETARY' PROGRAM PREPARES THE STUDENT WITH SUFFICIENT THEORETICAL KNOWLEDGE AND SPECIALIZED SECRETARIAL SKILLS TO ENABLE HIM/HER TO FUNCTION AT A JOB ENTRY LEVEL AS A MEDICAL SECRETARY. THE COURSE OF STUDY INCLUDES ANATOMY AND PHYSIOLOGY, MEDICAL TERMINOLOGY, MEDICAL TRANSCRIPTION AND TYPING, MEDICAL OFFICE PROCEDURES AND ADMINISTRATION AND BASIC PSYCHOLOGY. STUDENTS PARTICIPATE IN CLINICAL TRAINING IN AN AFFILIATED PRIVATE PRACTICE OR CLINICAL SETTING FOR 4 WEEKS.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS ISSUED AFTER COMPLETION OF FORMAL CLASS TRAINING AND A DIPLOMA IS ISSUED AFTER COMPLETION OF CLINICAL TRAINING.

--- LENGTH OF PROGRAM: THE MEDICAL SECRETARY PROGRAM IS 24 WEEKS PLUS 4 WEEKS OF CLINICAL TRAINING.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE UNIFORMS.

- - - - - 82027 MINNESOTA SCHOOL OF BUSINESS

--- OBJECTIVES OF THE PROGRAM: THE 'COURT REPORTING' PROGRAM PREPARES STUDENTS FOR CAREERS AS COURT REPORTERS. COURSES INCLUDE MACHINE SHORTHAND, COURT AND FREE LANCE REPORTER, BUSINESS COMMUNICATIONS, BUSINESS LAW, MEDICAL TERMINOLOGY, AND LEGAL PROCEDURES. AN INTERNSHIP OF AT LEAST 40 HOURS IS REQUIRED IN COURT EXPERIENCES. THREE SECRETARIAL PROGRAMS ARE OFFERED. THEY ARE: 'ADMINISTRATIVE SECRETARY', 'LEGAL SECRETARY', AND 'GENERAL SECRETARY'. COMMON AREAS OF STUDY ARE SECRETARIAL TRAINING, BUSINESS COMMUNICATIONS, TYPING, OFFICE PROCEDURES, AND WORD PROCESSING.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE LENGTH OF THE COURT REPORTING PROGRAM IS 108 WEEKS. THE ADMINISTRATIVE SECRETARY AND LEGAL SECRETARY PROGRAMS ARE 48 WEEKS LONG WHILE THE GENERAL SECRETARY PROGRAM IS 36 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS AND EQUIPMENT.

- - - - - 82030 NORTHERN TECHNICAL SCHOOL OF BUSINESS

--- OBJECTIVES OF THE PROGRAM: OUR SECRETARIAL DEPARTMENT OFFERS PROGRAMS THAT PREPARE A GRADUATE WITH A DIVERSITY OF SKILLS NECESSARY TO ENTER THE BUSINESS OFFICE AND ASSUME SECRETARIAL AND ADMINISTRATIVE RESPONSIBILITIES. IN ADDITION TO ACCOUNTING, COMMUNICATIONS, AND SHORTHAND SKILLS, ALL PROGRAMS PREPARE A GRADUATE WITH THE KNOWLEDGE AND ABILITY TO EFFECTIVELY OPERATE ELECTRONIC EQUIPMENT FOUND IN TODAY'S MODERN OFFICE. (MICRO-COMPUTERS, WORD PROCESSING) THE 'COURT REPORTING' PROGRAM TRAINS STUDENTS FOR CAREERS IN THE PROFESSIONAL FIELD OF COURT REPORTING. STUDENTS MAY ATTEND EITHER DAY SCHOOL OR EVENING SCHOOL. COURSES INCLUDE STENOGRAPH THEORY, MACHINE SHORTHAND AND TRANSCRIPTION, COURT REPORTING AND TRANSCRIPTION, TYPEWRITING, ENGLISH, BASIC LAW, AND LEGAL AND MEDICAL TERMINOLOGY. STUDENTS ARE REQUIRED TO COMPLETE A 40 HOUR INTERNSHIP. THEY PRACTICE SHORTHAND WRITING IN GENERAL OR COURT REPORTING PROCEEDINGS UNDER THE SUPERVISION OF A PRACTICING COURT REPORTER.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED UPON COMPLETION.

--- LENGTH OF PROGRAM: THE COURT REPORTING PROGRAM IS 96 WEEKS IN LENGTH, ADMINISTRATIVE SECRETARIAL IS 72 WEEKS, EXECUTIVE SECRETARIAL, PRIVATE SECRETARIAL AND LEGAL SECRETARIAL ARE 48 WEEKS, AND RECEPTIONISTS

SECRETARIAL, OFFICE SPECIALIST, AND WORD PROCESSING SECRETARIAL ARE 36 WEEKS LONG.

- - - - - 82038 RASMUSSEN BUSINESS COLLEGE

--- OBJECTIVES OF THE PROGRAM: SEVEN DIFFERENT 'SECRETARIAL' PROGRAMS ARE OFFERED. EACH PREPARES STUDENTS FOR A SPECIFIC TYPE OF SECRETARIAL JOB IN VARIOUS TYPES OF OFFICE SETTINGS. THE COURSES ARE: OFFICE SPECIALIST, SECRETARIAL, LEGAL SECRETARIAL, EXECUTIVE SECRETARIAL, WORD PROCESSING SECRETARIAL AND PRIVATE SECRETARIAL.

--- DEGREES OFFERED: EACH OF THESE OFFERS A DIPLOMA.

--- LENGTH OF PROGRAM: THE LENGTH OF EACH VARIES WITH THE STUDENT'S ABILITY, EDUCATION, AND EXPERIENCE. AVERAGE LENGTHS ARE: RECEPTIONIST-SECRETARIAL, WORD PROCESSING SECRETARIAL AND OFFICE SPECIALIST ARE 36 WEEKS LONG. ADMINISTRATIVE SECRETARIAL IS 72 WEEKS LONG. LEGAL, PRIVATE AND EXECUTIVE SECRETARIAL ARE 48 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS, DEPENDING ON COURSES, MAY RANGE FROM \$135 TO \$285.

- - - - - 82039 ST. CLOUD BUSINESS COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'COURT REPORTING' PROGRAM PREPARES STUDENTS FOR WORK IN THE FIELDS OF COURT REPORTING, FREE LANCE REPORTING, AGENCY WORK, AND CIVIL SERVICE POSITIONS. STUDENTS IN THIS PROGRAM LEARN TO WRITE DICTATION OF COURT PROCEEDINGS AND MEETINGS THROUGH MACHINE SHORTHAND. THEY ALSO COMPLETE BASIC BUSINESS COURSES IN TYPING, BUSINESS ENGLISH AND MATH, ACCOUNTING, AND OFFICE PROCEDURES. SEVEN DIFFERENT 'SECRETARIAL' PROGRAMS ARE OFFERED. EACH PROGRAM PROVIDES STUDENTS WITH DIFFERENT TYPES AND LEVELS OF SKILLS AS REQUIRED BY VARIOUS SECRETARIAL-CLERICAL JOBS IN DIFFERENT OFFICE SETTINGS. THE PROGRAMS ARE: 'OFFICE SPECIALISTS', 'LEGAL SECRETARIAL', 'RECEPTIONIST', 'PRIVATE SECRETARIAL', 'ADMINISTRATIVE SECRETARIAL', 'EXECUTIVE SECRETARIAL' AND 'WORD PROCESSING SECRETARY'.

--- DEGREES OFFERED: GRADUATES OF THESE PROGRAMS RECEIVE DIPLOMAS.

--- LENGTH OF PROGRAM: COURT REPORTING IS ABOUT 8 QUARTERS LONG, DEPENDING ON THE STUDENT'S EDUCATION, EXPERIENCE, AND APTITUDE. ADMINISTRATIVE SECRETARIAL IS 6 QUARTERS, LEGAL AND PRIVATE SECRETARIAL ARE 4 QUARTERS. THE OTHERS ARE ABOUT 3 QUARTERS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$550 FOR A STENOGRAPH MACHINE FOR COURT REPORTING.

- - - - - 82042 STRATFORD SCHOOL

--- OBJECTIVES OF THE PROGRAM: FOUR PROGRAMS ARE OFFERED: 'MODERN OFFICE ASSISTANT', 'CAREER SECRETARY', 'GED/MODERN OFFICE ASSISTANT' AND 'ADMINISTRATIVE SECRETARY'. THE FIRST TRAINS STUDENTS FOR OFFICE POSITIONS THAT REQUIRE TYPING BUT NOT SHORTHAND. THE SECOND PREPARES STUDENTS FOR ENTRY LEVEL SECRETARIAL POSITIONS THAT REQUIRE BOTH TYPING AND SHORTHAND. THE GED/MODERN OFFICE ASSISTANT PROGRAM TRAINS STUDENTS TO PREPARE FOR THEIR GED TEST IN ADDITION TO THE SECRETARIAL PROGRAM. THE ADMINISTRATIVE SECRETARY PROGRAM IS SIMILAR TO THE CAREER SECRETARY PROGRAM, BUT REQUIRES THE STUDENT TO ATTAIN BETTER SHORTHAND AND TYPING SPEEDS. STUDENTS IN THIS PROGRAM ALSO STUDY ACCOUNTING FUNDAMENTALS AND BUSINESS WRITING.

--- DEGREES OFFERED: GRADUATES OF THESE PROGRAMS RECEIVE CERTIFICATES.

--- LENGTH OF PROGRAM: THE MODERN OFFICE ASSISTANT AND CAREER SECRETARY PROGRAMS ARE EACH 24 WEEKS LONG. THE ADMINISTRATIVE SECRETARY PROGRAM IS 36 WEEKS LONG. THE GED/MODERN OFFICE ASSISTANT TAKES 28 WEEKS TO COMPLETE.

- - - - - 82082 JOHN ROBERT POWERS MODELING AND CAREER SCHOOL

--- OBJECTIVES OF THE PROGRAM: THE 'SPEED SCRIPT FUNDAMENTALS' COURSE IS DESIGNED TO HELP STUDENTS DEVELOP A FAST AND EASY WAY TO TAKE NOTES, EITHER FOR PERSONAL USE OR JOB IMPROVEMENT. STUDENTS STUDY THE RULES AND FUNDAMENTALS OF THIS TYPE OF SHORTHAND AND SPEND THEIR REMAINING TIME PRACTICING. THEY STUDY AT THEIR OWN RATE AND NO WORDS PER MINUTE SPEED IS GUARANTEED OR REQUIRED FOR GRADUATION.

--- DEGREES OFFERED: GRADUATES OF THIS COURSE RECEIVE DIPLOMAS.

--- LENGTH OF PROGRAM: THE CLASS MEETS 2 HOURS PER WEEK FOR 10 WEEKS OR TWICE A WEEK FOR 2 HOURS DEPENDING ON SCHEDULE AVAILABLE.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 83001 BETHANY LUTHERAN JUNIOR COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS EDUCATION' PROGRAM PREPARES STUDENTS FOR POSITIONS AS STENOGRAPHERS OR SECRETARIES. DURING THE FIRST YEAR, STUDENTS COMPLETE COURSES IN RELIGION, ENGLISH, TYPING, SHORTHAND, ECONOMICS, NATURAL SCIENCE, PHYSICAL EDUCATION, HEALTH, MATH, AND CALCULATING MACHINES. SECOND YEAR COURSES INCLUDE: RELIGION, SHORTHAND, CORRESPONDENCE, ACCOUNTING, ECONOMICS, SPEECH, PSYCHOLOGY, HUMANITIES, FILING AND RECORDS MANAGEMENT, AND OFFICE MACHINES.

--- DEGREES OFFERED: GRADUATES RECEIVE THE ASSOCIATE IN ARTS DEGREE OR THE JUNIOR COLLEGE DIPLOMA.

--- LENGTH OF PROGRAM: THIS IS A 4-YEAR PROGRAM.

- - - - - 83003 GOLDEN VALLEY LUTHERAN COLLEGE

--- OBJECTIVES OF THE PROGRAM: FIVE SPECIALIZED PROGRAMS ARE OFFERED: 'GENERAL SECRETARIAL', 'MEDICAL SECRETARIAL', 'LEGAL SECRETARIAL', 'OFFICE ADMINISTRATION', AND 'PARISH SECRETARIAL'. THESE PROGRAMS COMBINE BIBLICAL STUDIES, LIBERAL ARTS, AND SKILLS TRAINING TO PREPARE THE STUDENT TO ENTER A SPECIALIZED FIELD OF SECRETARIAL WORK. FOUR VOCATIONAL PROGRAMS ARE ALSO OFFERED: 'GENERAL SECRETARIAL', 'LEGAL SECRETARIAL', 'OFFICE ADMINISTRATION', 'MEDICAL SECRETARIAL'. STUDENTS IN THESE FOUR PROGRAMS COMPLETE THE SAME TYPES OF SKILLS COURSES, BUT TAKE FEWER BIBLICAL AND LIBERAL ARTS COURSES.

--- DEGREES OFFERED: GRADUATES OF THE SPECIALIZED PROGRAMS RECEIVE THE ASSOCIATE IN ARTS DEGREE, WHILE GRADUATES OF THE VOCATIONAL PROGRAMS RECEIVE THE ONE YEAR VOCATIONAL CERTIFICATE.

--- LENGTH OF PROGRAM: THE SPECIALIZED PROGRAMS ARE 2 YEARS LONG, WHILE THE VOCATIONAL PROGRAMS ARE 1 YEAR LONG.

- - - - - 84014 NORTHWESTERN COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL SCIENCE' PROGRAM GIVES THE STUDENT MARKETABLE SKILLS IN THE SECRETARIAL FIELD. STUDENTS ARE REQUIRED TO TAKE 30 CREDITS OF BIBLE. SECRETARIAL REQUIREMENTS INCLUDE: SECRETARIAL ACCOUNTING, INTERMEDIATE AND ADVANCED TYPING, PROOFREADING, BUSINESS COMMUNICATIONS, WORD PROCESSING AND OFFICE TECHNIQUES AND TECHNOLOGY. THE 'OFFICE ADMINISTRATION' MAJOR FAMILIARIZES STUDENTS WITH ALL ASPECTS OF THE CONTEMPORARY BUSINESS OFFICE, AND PREPARES GRADUATES WITH THE MANAGERIAL SKILLS NEEDED TO BE EFFICIENT, EFFECTIVE OFFICE MANAGERS. STUDENTS COMPLETING THIS MAJOR HAVE AN UNDERSTANDING OF MODERN OFFICE MANAGEMENT PHILOSOPHIES AND A KNOWLEDGE OF ADMINISTRATION PROCEDURES. STUDENTS ARE REQUIRED TO TAKE 45 CREDITS OF BIBLE.

--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE, VOCATIONAL STUDIES AND BIBLE

ARE OFFERED. A SPECIALIZATION MAY BE TAKEN IN LEGAL, MEDICAL OR EXECUTIVE, WITH OR WITHOUT SHORTHAND.

--- LENGTH OF PROGRAM: THE SECRETARIAL SCIENCE PROGRAM IS TWO YEARS.

- - - - - 84015 PILLSBURY BAPTIST BIBLE COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'SECRETARIAL STUDIES' PROGRAM TRAINS STUDENTS TO WORK AS CHURCH SECRETARIES OR AS SECRETARIES IN VARIOUS CHRISTIAN ORGANIZATIONS. COURSES INCLUDE SHORTHAND, TYPING, BUSINESS MATHEMATICS, BASIC ACCOUNTING, DUPLICATING MACHINES, BUSINESS MACHINES, FILING AND RECORDS, AND GENERAL OFFICE PRACTICE. ALL STUDENTS MUST ALSO MAJOR IN THE BIBLE. STUDENTS IN THE 4-YEAR PROGRAM MUST ALSO COMPLETE THE GENERAL EDUCATION REQUIREMENTS.

--- DEGREES OFFERED: THE 2-YEAR PROGRAM OFFERS AN ASSOCIATE OF ARTS DEGREE, AND THE 4-YEAR PROGRAM OFFERS A BACHELOR OF ARTS DEGREE WITH A MAJOR IN THE BIBLE.

161 HOTEL AND MOTEL MANAGEMENT

Programs in hotel and motel management intend to prepare people for employment in the hotel/motel industry. Most also provide training in the management of food services as part of hotel/motel operations. Business management is generally the core of the program. Students may study bookkeeping, purchasing and control, front office procedures, math and business theory, and personnel management. Programs are offered at universities, community colleges, and vocational schools. Program length ranges from certificate programs of 6 months to 4-year bachelor's degree programs.

---PROGRAM ADMISSION: There are no formal requirements to enter programs of hotel/motel management. Many programs have limited enrollment and deadlines for admission. Contact the school you plan to attend at least six months in advance.

---TYPICAL COURSE WORK: Most programs of hotel/motel management include similar core subjects. These subjects are usually introduced in a classroom using lectures. On-the-job experience is included in most programs. The following is a list of core subjects:

Front Office Procedures	Business Law
Introduction to Hotel	Accounting
Management	Property Management
Hotel-Motel Organization	Sanitation and Safety
and Administration	

---GRADUATION REQUIREMENTS: Students must complete the course of study defined by the institution of their choice. See college catalogs and school brochures for details.

---THINGS TO KNOW: It is important to have a basic background in math, bookkeeping, human relations, and marketing. These courses may be taken in high school to improve chances of success in a management program. It is possible to enroll in part-time programs. Some evening programs are also available. Before enrolling, it may be helpful to discuss the program with a person who has recently graduated from the institution. They may be able to provide valuable hints and insight into the operation of the program.

---RELATED PROGRAMS: PROG 399 Food Service, 145 Business Management and Administration.

---DIRECTLY RELATED OCCUPATIONS: DESC 1132 Hotel and Motel Managers, 1131 Restaurant Managers, 1458 Front Desk Clerks.

CIPS: 06.07 (except 06.0705)

SCHOOLS:

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HOTEL/MOTEL MANAGEMENT' PROGRAM PREPARES INDIVIDUALS TO MANAGE MOTELS AND HOTELS. IT INCLUDES INSTRUCTION IN HOTEL MANAGEMENT, FRONT OFFICE MANAGEMENT, FOOD AND BEVERAGE MANAGEMENT, CATERING AND CONVENTION PLANNING, HOTEL SALES, AND ADVERTISING AND PROMOTION.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 20 MONTHS LONG.
 --- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$90 FOR BOOKS AND SUPPLIES THE FIRST YEAR AND \$90 THE SECOND YEAR.
 - - - - - 27156 NORMANDALE COMMUNITY COLLEGE
 --- OBJECTIVES OF THE PROGRAM: THE 'HOSPITALITY' PROGRAM PREPARES STUDENTS FOR CAREERS IN THE HOSPITALITY INDUSTRY. STUDENTS STUDY MAINTENANCE, OFFICE PROCEDURES, MANAGEMENT, AND HOTEL-MOTEL LAW AS WELL AS FOOD AND BEVERAGE COURSES, SANITATION AND ACCOUNTING. AN INTERNSHIP IN BUSINESS IS ALSO REQUIRED.
 --- DEGREES OFFERED: GRADUATES RECEIVE AN ASSOCIATE IN APPLIED SCIENCE DEGREE.
 --- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

 - - - - - 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL COLLEGE
 --- OBJECTIVES OF THE PROGRAM: THE 'HOTEL/RESORT MANAGEMENT' PROGRAM PREPARES STUDENTS FOR SUPERVISORY POSITIONS IN HOTELS AND RESORTS. STUDENTS COMPLETE GENERAL EDUCATION COURSES AND AN INTERNSHIP, AS WELL AS COURSES IN FOOD, BUSINESS, AND HUMAN RELATIONS.
 --- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED IN THIS PROGRAM.
 --- LENGTH OF PROGRAM: THIS IS A TWO YEAR PROGRAM.

161 HOTEL AND MOTEL MANAGEMENT TRANSFERS:
 - - - - - 27139 AUSTIN COMMUNITY COLLEGE
 - - - - - 27140 BRAINERD COMMUNITY COLLEGE
 - - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE
 - - - - - 27143 HIBBING COMMUNITY COLLEGE
 - - - - - 27145 WILLMAR COMMUNITY COLLEGE
 - - - - - 27146 WORTHINGTON COMMUNITY COLLEGE
 - - - - - 27147 VERMILION COMMUNITY COLLEGE
 - - - - - 27149 NORTHLAND COMMUNITY COLLEGE
 - - - - - 27150 MESABI COMMUNITY COLLEGE
 - - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE
 - - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE
 - - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE
 - - - - - 27155 RAINY RIVER COMMUNITY COLLEGE
 - - - - - 27157 INVER HILLS COMMUNITY COLLEGE
 - - - - - 81003 UNIVERSITY OF MINNESOTA - MORRIS
 - - - - - 83002 CROSIER SEMINARY JUNIOR COLLEGE
 - - - - - 84013 NORTH CENTRAL BIBLE COLLEGE
 - - - - - 84014 NORTHWESTERN COLLEGE
 - - - - - 84015 PILLSBURY COLLEGE

Programs in health care administration are designed to teach people to administer some aspect of the health care delivery system. They intend to prepare people to manage health service facilities from large medical centers and hospitals to small nursing homes and retirement facilities.

Some community colleges offer programs which may be transferred to a four-year college or university offering a health care administration program. Bachelor's degree programs intend to prepare students for entry-level administrative positions. These can be in long-term care facilities (nursing homes and retirement residences), public health services, or private health care facilities (clinics and hospitals). Graduate programs usually concentrate on hospital administration, medical care administration and organization, or comprehensive health planning. Graduate programs are usually two years beyond the bachelor's degree.

---PROGRAM ADMISSION: A high school diploma or its equivalent is normally required for admission to undergraduate programs. A bachelor's degree in health care administration, or in a related field, is usually required for admission to graduate programs.

---TYPICAL COURSE WORK: Course work varies with school, program, and emphasis. Most programs include all or most of the following:

Accounting	Purchasing for Institutions
Nutrition	Organizational Management
Food Service Systems	Family Relationships
Gerontology	Quantitative Methods
Hospital Organization	Economics
Financial Planning	Personnel Administration

---GRADUATION REQUIREMENTS: Requirements vary. See college catalogs for more information.

---THINGS TO KNOW: Many graduate programs include supervised field experience in hospitals, clinics, or health agencies.

---RELATED PROGRAMS: PROG 145 Business Management and Administration, 163 Medical Records Administration, 363 Medicine.

---DIRECTLY RELATED OCCUPATIONS: DESC 1134 Health Services Administrators.

CIPS: 18.07

SCHOOLS:

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: FIVE BUSINESS MANAGEMENT PROGRAMS ARE OFFERED: 'SMALL BUSINESS MANAGEMENT', 'RETAIL OPERATIONS MANAGEMENT', 'SUPERVISORY MANAGEMENT', 'TRANSPORTATION MANAGEMENT' AND 'HEALTH CARE MANAGEMENT'. THESE PROGRAMS PREPARE STUDENTS FOR ENTRY LEVEL MANAGEMENT OR SUPERVISORY POSITIONS AND/OR UPGRADE PEOPLE FOR CAREERS IN DIFFERENT BUSINESS SETTINGS.

--- DEGREES OFFERED: A VOCATIONAL CERTIFICATE AND AN ASSOCIATE DEGREE ARE OFFERED IN ALL PROGRAMS.

--- LENGTH OF PROGRAM: ONE AND TWO YEAR PROGRAMS ARE AVAILABLE IN ALL AREAS.

Medical records administration programs intend to prepare people to manage medical records departments in hospitals. This includes supervising medical records staff; planning and administering health information systems; analyzing medical records, data, and statistics; and conducting health care surveys and research projects. These programs are usually four-year bachelor's degree programs offered at colleges and universities. Certificates in medical records administration are also available by taking one year of postgraduate work in medical records administration after receiving a bachelor's degree in a related field.

Medical records technician programs are designed to prepare people to review, analyze, and transcribe medical records, admit patients, and compile statistics. These programs are usually two-year associate degree programs offered at colleges and community colleges. A correspondence program is available through the American Medical Records Administration.

Medical records clerk programs consist of training in basic medical records clerical tasks. These programs include training in assembling information, gathering statistics, locating records, filing, and entering some information into medical records. These programs may be offered as one-year certificate programs, correspondence programs, or on-the-job training. Certificate programs are usually offered at community colleges and private and public vocational schools.

Graduates of accredited medical records administration and medical records technician programs are eligible to take the certification exams of the American Medical Records Association.

---PROGRAM ADMISSION: Applicants to medical records administration bachelor's degree programs must have a high school diploma or its equivalent. A background in health, computer science, business administration, math, and biology is helpful. Persons who wish to pursue the post-bachelor certificate in medical records administration also need to take certain undergraduate courses in the sciences and statistics. The specific undergraduate course requirements vary among schools. Some medical records administration programs require admissions tests and letters of recommendation. Students should contact the school of their choice to learn of admission requirements.

Medical records technician and clerk program applicants must have a high school diploma or its equivalent. Although not required, a background in science, health, typing, math, and office practice is useful for both medical records technician and clerk programs.

---TYPICAL COURSE WORK: Medical records administration programs include core course work in the following subjects. These subjects are taught through lectures and practical experience working with health records.

Anatomy	Hospital Organization and
Physiology	Administration
Medical Terminology	Fundamentals of Medical
Medical Records Science	Science
Data Processing	Health Law
Computer Science	Statistics

Medical records technician and medical records clerk programs are taught through lecture, discussion, and practical experience. They include most or all of the following subjects:

Biology	Business Management
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Anatomy and Physiology
Medical Terminology
Medical Records Science

Secretarial Skills
Medical Transcription

---GRADUATION REQUIREMENTS: Accredited programs in both medical records administration and technician require students to complete a practical experience in a medical records setting. See school catalogs for graduation requirements for specific programs.

---THINGS TO KNOW: Most employers prefer hiring medical records technicians who have attended an accredited program and have passed the accrediting exam of the American Medical Records Association. Medical records clerks with several years of experience can advance to medical records technician by taking a combination of independent study and college courses. For more information, contact the American Medical Records Association.

---RELATED PROGRAMS: PROG 162 Health Care Administration, 366 Medical Assisting, 158 Secretarial Studies and Office Administration.

---DIRECTLY RELATED OCCUPATIONS: DESC 1436 Medical Records Technicians.

ASSOCIATED OCCUPATIONS: DESC 1438 Medical Secretaries, 8195 Medical Assistants, 1134 Health Services Administrators.

---REFERENCES: For information on all three programs write to the following (be sure to specify which program or programs are of interest):
American Medical Records Administration
John Hancock Center
Suite 1850
875 North Michigan Avenue
Chicago, IL 60611

CIPS: 17.0502
17.0505
17.0506

SCHOOLS:

----- 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL RECORDS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO DEVELOP STATISTICAL REPORTS, CODE DISEASES AND OPERATIONS, AND MAINTAIN INDEXES ACCORDING TO ACCEPTED PROCEDURES, TAKE RECORDS TO COURT, HANDLE REQUESTS FOR MEDICAL INFORMATION, RECORD MINUTES OF MEDICAL STAFF COMMITTEE MEETINGS, AND SUPERVISE FILING AREAS AND ACTIVITIES OF MEDICAL RECORDS CLERKS.

THE 'WARD CLERK' PROGRAM PREPARES INDIVIDUALS TO PERFORM SUCH DUTIES AS ANSWERING THE TELEPHONE, RELAYING MESSAGES, RECEIVING AND DIRECTING VISITORS, TRANSCRIBING ORDERS AND PREPARING REQUISITION FORMS IN THE NURSING UNIT OF A HOSPITAL OR OTHER HEALTH CARE FACILITY UNDER THE SUPERVISION OF A HEAD NURSE.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED. THE STUDENT ALSO ATTENDS CLASSES AT NORTH HENNEPIN OR ANOKA-RAMSEY COMMUNITY COLLEGE AND RECEIVES AN A.A.S. DEGREE IN MEDICAL RECORDS TECHNOLOGY.

--- LENGTH OF PROGRAM: THE MEDICAL RECORDS PROGRAM IS 11 MONTHS LONG.

--- SPECIAL COSTS: COSTS ARE \$250 FOR BOOKS AND SUPPLIES.

- - - - - 25019 MOORHEAD AREA VOCATIONAL TECHNICAL INSTITUT
--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL RECORDS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO DEVELOP STATISTICAL REPORTS, CODE DISEASES AND OPERATIONS, AND MAINTAIN INDEXES ACCORDING TO ACCEPTED PROCEDURES, TAKE RECORDS TO COURT, HANDLE REQUESTS FOR MEDICAL INFORMATION, RECORD MINUTES OF MEDICAL STAFF COMMITTEE MEETINGS, AND SUPERVISE FILING AREAS AND ACTIVITIES OF MEDICAL RECORDS CLERKS.
--- LENGTH OF PROGRAM: THIS PROGRAM IS 20 MONTHS LONG.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'WARD CLERK' PROGRAM PREPARES INDIVIDUALS TO PERFORM SUCH DUTIES AS ANSWERING THE TELEPHONE, RELAYING MESSAGES, RECEIVING AND DIRECTING VISITORS, TRANSCRIBING ORDERS AND PREPARING REQUISITION FORMS IN THE NURSING UNIT OF A HOSPITAL OR OTHER HEALTH CARE FACILITY UNDER THE SUPERVISION OF A HEAD NURSE.
--- LENGTH OF PROGRAM: THIS PROGRAM IS 11 WEEKS LONG.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'WARD CLERK' PROGRAM PREPARES INDIVIDUALS TO PERFORM SUCH DUTIES AS ANSWERING THE TELEPHONE, RELAYING MESSAGES, RECEIVING AND DIRECTING VISITORS, TRANSCRIBING ORDERS AND PREPARING REQUISITION FORMS IN THE NURSING UNIT OF A HOSPITAL OR OTHER HEALTH CARE FACILITY UNDER THE SUPERVISION OF A HEAD NURSE.
--- LENGTH OF PROGRAM: THIS PROGRAM TAKES 9 TO 12 WEEKS TO COMPLETE.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS
--- OBJECTIVES OF THE PROGRAM: THE 'WARD CLERK' PROGRAM PREPARES INDIVIDUALS TO PERFORM SUCH DUTIES AS ANSWERING THE TELEPHONE, RELAYING MESSAGES, RECEIVING AND DIRECTING VISITORS, TRANSCRIBING ORDERS AND PREPARING REQUISITION FORMS IN THE NURSING UNIT OF A HOSPITAL OR OTHER HEALTH CARE FACILITY UNDER THE SUPERVISION OF A HEAD NURSE.
--- LENGTH OF PROGRAM: THIS IS A FOUR MONTH PROGRAM.

- - - - - 25032 EAST GRAND FORKS AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'WARD CLERK' PROGRAM PREPARES INDIVIDUALS TO PERFORM SUCH DUTIES AS ANSWERING THE TELEPHONE, RELAYING MESSAGES, RECEIVING AND DIRECTING VISITORS, TRANSCRIBING ORDERS AND PREPARING REQUISITION FORMS IN THE NURSING UNIT OF A HOSPITAL OR OTHER HEALTH CARE FACILITY UNDER THE SUPERVISION OF A HEAD NURSE.
--- DEGREES OFFERED: DEGREES OF OCCUPATIONAL PROFICIENCY ARE OFFERED.
--- LENGTH OF PROGRAM: THE WARD CLERK PROGRAM IS 16 WEEKS LONG.
--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE BOOKS, SUPPLIES AND EQUIPMENT.

- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE
--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL RECORDS TECHNICIAN' PROGRAM REQUIRES CONCURRENT STUDY AT ANOKA AVTI. STUDENTS TAKE GENERAL EDUCATION COURSES AS WELL AS COURSES IN MEDICAL TERMINOL-OGY AND MEDICAL RECORDS SCIENCE IN PREPARATION FOR CERTIFICATION AS MEDICAL RECORDS TECHNICIANS. STUDENTS ARE ALSO REQUIRED TO COMPLETE DIRECTED PRACTICAL EXPERIENCES.
--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED. GRADUATES MAY ALSO BE CERTIFIED BY THE AMERICAN ASSOCIATION OF MEDICAL RECORDS TECHNICIANS.
--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL RECORD TECHNICIAN' PROGRAM IS OFFERED JOINTLY WITH THE ANOKA TECHNICAL CENTER. GENERAL EDUCATION COURSES, MEDICAL RECORD TECHNOLOGY COURSES, AND A SUPERVISED ON-THE-JOB TRAINING EXPERIENCE ARE REQUIRED FOR COMPLETION OF THIS PROGRAM.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS TWO ACADEMIC YEARS PLUS A SUMMER SESSION LONG.

- - - - - 81037 LAKELAND MEDICAL-DENTAL ACADEMY

--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL ADMINISTRATIVE ASSISTANT' PROGRAM TRAINS STUDENTS TO WORK IN ENTRY LEVEL POSITIONS IN A VARIETY OF ORGANIZATIONS THAT REQUIRE A KNOWLEDGE OF MEDICAL TERMINOLOGY/FINANCIAL RECORDS/INSURANCE RELATED TO THE MEDICAL FIELD AND THE TECHNICAL SKILLS NEEDED TO WORK WITH WORD PROCESSING AND/OR DATA PROCESSING EQUIPMENT. COURSES OF STUDY INCLUDE THE FOLLOWING: ANATOMY AND PHYSIOLOGY, BUSINESS ENGLISH, BUSINESS MATH AND MACHINES, MEDICAL AND FINANCIAL RECORDS, MEDICAL TERMS, SECRETARIAL/ADMINISTRATIVE PROCEDURES, TYPING, INSURANCE THEORY & PRACTICE, MEDICAL TRANSCRIPTION, ORAL COMMUNICATIONS, PSYCHOLOGY, MEDICAL LAW & ETHICS, WORD PROCESSING/DATA PROCESSING, WRITTEN COMMUNICATIONS, FIRST AID/CPR, PRINCIPLES OF OFFICE MANAGEMENT. A ONE MONTH INTERNSHIP IN A CLINIC OR HOSPITAL MUST ALSO BE SUCCESSFULLY COMPLETED BEFORE GRADUATION. NO ACCREDITATION IS AVAILABLE.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED AFTER SUCCESSFUL COMPLETION OF THE INTERNSHIP.

--- LENGTH OF PROGRAM: THE PROGRAM IS 36 WEEKS (9 MONTHS) LONG. (EQUIVALENT TO ONE ACADEMIC YEAR). REDUCED/INDIVIDUAL SCHEDULES ARE AVAILABLE FOR STUDENTS WHO WISH TO ATTEND SCHOOL ON A PART-TIME BASIS, THUS TAKING A REDUCED NUMBER OF HOURS PER WEEK FOR A LONGER PERIOD OF TIME.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE EXPENDABLE SUPPLIES, UNIFORMS, SMOCK, AND SHOES. BOOK AND SUPPLY FEES ARE INCLUDED IN THE TOTAL COST OF THE COURSE.

- - - - - 83004 SAINT MARY'S JUNIOR COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL RECORDS TECHNICIAN: HEALTH INFORMATION SPECIALIST' PROGRAM TRAINS STUDENTS AS ASSISTANTS TO HEALTH RECORDS PROFESSIONALS IN HOSPITALS, CLINICS, NURSING HOMES, AND OTHER HEALTH FACILITIES. COURSES ARE REQUIRED IN INFORMATION AND STORAGE AND RETRIEVAL SYSTEMS, DATA PROCESSING, MEDICAL TERMINOLOGY, AND MEDICINE AND THE LAW. GENERAL EDUCATION COURSES ARE ALSO REQUIRED.

--- DEGREES OFFERED: AN ASSOCIATE OF APPLIED SCIENCE DEGREE IS OFFERED AND GRADUATES ARE ELIGIBLE TO TAKE THE NATIONAL ACCREDITATION EXAM OF THE AMERICAN ASSOCIATION OF MEDICAL RECORDS TECHNICIANS, FOR A.R.T.

--- LENGTH OF PROGRAM: THIS IS A 6 QUARTER PROGRAM. STUDENTS MAY ENTER DURING ANY QUARTER OF THE YEAR.

163 MEDICAL RECORDS ADMINISTRATION TRANSFER PROGRAMS:

- - - - - 26073 ST. CLOUD STATE UNIVERSITY
- - - - - 27139 AUSTIN COMMUNITY COLLEGE
- - - - - 27140 BRAINERD COMMUNITY COLLEGE
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27144 ITASCA COMMUNITY COLLEGE
- - - - - 27145 WILLMAR COMMUNITY COLLEGE
- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE
- - - - - 27147 VERMILION COMMUNITY COLLEGE
- - - - - 27148 ROCHESTER COMMUNITY COLLEGE
- - - - - 27149 NORTHLAND COMMUNITY COLLEGE

- - - - - 27150 MESABI COMMUNITY COLLEGE
- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE
- - - - - 27157 INVER HILLS COMMUNITY COLLEGE
- - - - - 83002 CROSIER SEMINARY JUNIOR COLLEGE
- - - - - 84013 NORTH CENTRAL BIBLE COLLEGE
- - - - - 84014 NORTHWESTERN COLLEGE
- - - - - 84015 PILLSBURY COLLEGE

Journalism programs intend to prepare people for careers in a variety of fields: newspaper reporting and editing, magazine writing and editing, advertising, public relations, photo-journalism, radio-television news and management, and the teaching of journalism. In each field, study includes the problems and techniques of communicating information and ideas to large and varied audiences.

Programs in communications intend to provide skills in oral and written communications. Some programs focus on communication theory and research or interpersonal and organizational communication. Other programs survey or include emphasis in communications, journalism, radio-television, or public relations.

Programs vary in length from two-year to graduate level offerings. Many two- and four-year colleges offer the first two years of course work that can be transferred to four-year schools offering bachelor degrees in journalism.

---PROGRAM ADMISSION: Most journalism schools prefer students who have a broad liberal arts background with emphasis on English, literature, speech, history, and the social sciences. Foreign languages are usually not required for entry, but are strongly recommended.

Programs at four-year schools accredited by the American Council on Education for Journalism usually accept only 12 hours of transfer credit in journalism from two-year colleges. Graduate-level programs may have limited enrollments and require early application, letters of recommendation, and a portfolio containing samples of the applicant's journalistic work.

---TYPICAL COURSE WORK: Most programs include lectures, small classes, laboratory work, independent projects, and internships. Programs vary depending on whether students are specializing in news-editorial, broadcasting, advertising, or public relations. Most programs, however, include some or all of the following courses:

Introduction to Mass Media	News Reporting
Photojournalism	News Editing
Layout and Design	History of Journalism
Communications Law	Mass Media and Society

Specialization in news-editorial will involve additional writing and editing courses. In broadcasting, additional production and technical courses are required. Specialization in advertising and public relations will involve additional copywriting, layout, and advertising courses. Most four-year programs emphasize a broad liberal arts and sciences background with no more than a fourth of the student's course work in journalism. Some journalism programs require a second major, preferably in business or social sciences.

---GRADUATION REQUIREMENTS: See college catalogs for additional information about curriculum and graduation requirements.

---THINGS TO KNOW: Many journalism programs require or recommend that students complete internships at newspapers, radio and television stations, advertising agencies, or public relations departments. Students are encouraged to work for college newspapers, radio stations, and yearbooks and/or work part-time for local media outlets while still in school.

Radio and television announcers and technicians are subject to

licensing requirements set by the Federal Communications Commission. For more information on licensing, see PREP 9824.

---RELATED PROGRAMS: PROG 196 Communication Technologies, 311 Art, 317 Photographic Arts, 441 English and Literature, 443 Speech, 448 Liberal Studies.

---DIRECTLY RELATED OCCUPATIONS: DESC 8468 Newspaper Reporters, 9832 Literary Writers.

ASSOCIATED OCCUPATIONS: DESC 4734 Photographers, 9824 Radio and Television Announcers, 4744 Advertising Copywriters, 5628 Broadcast Technicians.

---REFERENCES: For additional information and a list of accredited journalism schools, contact:

American Council on Education for Journalism
563 Essex Court
Deerfield, IL 60015

For licensing information contact:

Federal Communications Commission
(District Office)
316 North Robert Street
St. Paul, MN 55101
(612) 725-7810

CIPS: 09.

SCHOOLS:

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ADVERTISING' PROGRAM PREPARES INDIVIDUALS TO PERFORM ADVERTISING FUNCTIONS AND TASKS. INSTRUCTION IN THE CREATION, EXECUTION, TRANSMISSION, AND EVALUATION OF COMMERCIAL MESSAGES CONCERNED WITH THE PROMOTION AND SALE OF PRODUCTS AND SERVICES IS INCLUDED.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM LASTS 18 MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$597 FOR BOOKS AND SUPPLIES FOR THE FIRST YEAR AND \$347 FOR THE SECOND YEAR.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES: THE 'INTERPRETING FOR THE DEAF' PROGRAM PREPARES AN INDIVIDUAL FOR ENTRY-LEVEL INTERPRETING. INSTRUCTION IN BOTH EXPRESSIVE AND RECEPTIVE ORAL AND MANUAL INTERPRETATIONS IS INCLUDED.

--- LENGTH OF PROGRAM: THIS PROGRAM LASTS 6 MONTHS.

- - - - - 25029 WADENA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ADVERTISING' PROGRAM PREPARES INDIVIDUALS TO PERFORM ADVERTISING FUNCTIONS AND TASKS. INSTRUCTION IN THE CREATION, EXECUTION, TRANSMISSION, AND EVALUATION OF COMMERCIAL MESSAGES CONCERNED WITH THE PROMOTION AND SALE OF PRODUCTS AND SERVICES IS INCLUDED.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM LASTS 11 MONTHS.

--- SPECIAL COSTS: THE COSTS WILL INCLUDE \$167 FOR BOOKS AND SUPPLIES.

----- 27148 ROCHESTER COMMUNITY COLLEGE
--- OBJECTIVES OF THE PROGRAM: THE 'MASS MEDIA TECHNOLOGY' PROGRAM OFFERS A PRINT MEDIA OPTION. THIS OPTION IS DESIGNED TO PREPARE STUDENTS FOR CAREERS IN REPORTING, WRITING, PHOTOGRAPHY, AND ADVERTISING ON SMALL DAILY AND WEEKLY NEWSPAPERS, INDUSTRIAL PUBLICATIONS AND MAGAZINES. THE 'BROADCAST MEDIA' OPTION PREPARES STUDENTS FOR CAREERS IN COMMUNITY RADIO AND TELEVISION WORK, INCLUDING ANNOUNCING, NEWS GATHERING, WRITING AND ADVERTISING.

--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE LENGTH OF THE PRINT MEDIA PROGRAM IS 2 YEARS.

----- 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL COLLEGE
--- OBJECTIVES OF THE PROGRAM: THE 'RURAL COMMUNICATIONS' MAJOR TRAINS STUDENTS FOR WORK AS JOURNALISTS IN THE RURAL MASS COMMUNICATIONS INDUSTRY. STUDENTS WORK ON THE CAMPUS AND LOCAL NEWSPAPERS AND CAMPUS RADIO STATION AND TAKE COURSES IN TYPING, PHOTOGRAPHY, WRITING, AND GENERAL AGRICULTURAL SUBJECTS. THEY ALSO COMPLETE A SIX CREDIT INTERNSHIP.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE WITH A MAJOR IN RURAL COMMUNICATIONS IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

----- 81005 UNIVERSITY OF MINNESOTA-WASECA TECHNICAL COLLEGE
--- OBJECTIVES OF THE PROGRAM: THE 'AGRICULTURAL COMMUNICATIONS' MAJOR PROVIDES TRAINING FOR ENTRY INTO CAREERS IN AGRICULTURE-RELATED MEDIA. THE PROGRAM INCLUDES A CORE OF AGRICULTURE AND RELATED EDUCATION COURSES AS WELL AS TECHNICAL COURSES IN COMMUNICATIONS, WRITING, PHOTOGRAPHY, AND BROADCASTING. NOTE: NOT NOW ACCEPTING STUDENTS IN COMMUNICATIONS MAJOR.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IN AGRICULTURAL INDUSTRIES AND SERVICES IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

----- 82005 BROWN INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'RADIO AND TV BROADCASTING' PROGRAM PREPARES STUDENTS FOR CAREERS IN RADIO AND TV BROADCASTING. STUDENTS TAKE COURSES IN THEORY AND SPEND 380 HOURS IN PRACTICAL APPLICATION. THERE IS A SPORTS COURSE ELECTIVE OFFERED TO STUDENTS WHO HAVE COMPLETED 8 WEEKS OF THE RADIO AND TV BROADCASTING PROGRAM. THE 'ADVANCED TELEVISION' PROGRAM IS DESIGNED FOR STUDENTS WHO WISH TO OBTAIN MORE TRAINING WITHIN THE TELEVISION MEDIUM. EACH STUDENT MUST ORIGINATE, DIRECT, AND PRODUCE THEIR OWN TV PROGRAM.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 40 WEEKS LONG IF TAKEN IN THE DAY SCHOOL AND 68 WEEKS IF TAKEN IN THE EVENING SCHOOL. THE ADVANCED COURSES ARE 8 WEEKS OF DAYS OR 13 WEEKS OF EVENINGS.

--- SPECIAL COSTS: COSTS MAY VARY FROM \$30 TO \$180 FOR BOOKS AND SUPPLIES.

----- 84014 NORTHWESTERN COLLEGE
--- OBJECTIVES OF THE PROGRAM: THE 'COMMUNICATION' PROGRAM IS DESIGNED TO PREPARE THE STUDENT FOR CAREERS IN VARIOUS COMMUNICATIONS FIELDS. THE STUDENT CHOOSES ONE OF FOUR CONCENTRATIONS: 'LANGUAGE/LITERATURE', 'JOURNALISM', 'SPEECH/DRAMA' OR 'BROADCASTING'. THE 'BROADCASTING' PROGRAM IS DESIGNED PREPARE STUDENTS FOR MASS COMMUNICATIONS CAREERS IN ANNOUNCING, PROGRAMMING, PRODUCTION, WRITING, AND ADVERTISING. STUDENTS ARE REQUIRED

TO TAKE A ONE YEAR COURSE IN THE BIBLE. THIS INCLUDES HISTORY AND LITERATURE OF THE BIBLE AS WELL AS DOCTRINE.

--- DEGREES OFFERED: A BACHELOR OF ARTS OR A BACHELOR OF SCIENCE DEGREE IS OFFERED. AN ASSOCIATE IN ARTS, VOCATIONAL STUDIES, BIBLE, AND BACHELOR OF SCIENCE DEGREE ARE OFFERED.

--- LENGTH OF PROGRAM: THE COMMUNICATION PROGRAM IS 4 YEARS LONG.

193 JOURNALISM AND COMMUNICATIONS TRANSFER PROGRAMS:

- - - - -	27139	AUSTIN COMMUNITY COLLEGE
- - - - -	27140	BRAINERD COMMUNITY COLLEGE
- - - - -	27142	FERGUS FALLS COMMUNITY COLLEGE
- - - - -	27143	HIBBING COMMUNITY COLLEGE
- - - - -	27144	ITASCA COMMUNITY COLLEGE
- - - - -	27145	WILLMAR COMMUNITY COLLEGE
- - - - -	27146	WORTHINGTON COMMUNITY COLLEGE
- - - - -	27147	VERMILION COMMUNITY COLLEGE
- - - - -	27149	NORTHLAND COMMUNITY COLLEGE
- - - - -	27150	MESABI COMMUNITY COLLEGE
- - - - -	27151	MINNEAPOLIS COMMUNITY COLLEGE
- - - - -	27152	ANOKA-RAMSEY COMMUNITY COLLEGE
- - - - -	27153	NORTH HENNEPIN COMMUNITY COLLEGE
- - - - -	27154	LAKEWOOD COMMUNITY COLLEGE
- - - - -	27155	RAINY RIVER COMMUNITY COLLEGE
- - - - -	27156	NORMANDALE COMMUNITY COLLEGE
- - - - -	27157	INVER HILLS COMMUNITY COLLEGE
- - - - -	81003	UNIVERSITY OF MINNESOTA - MORRIS
- - - - -	83001	BETHANY LUTHERAN JUNIOR COLLEGE
- - - - -	83002	CROSIER SEMINARY JUNIOR COLLEGE
- - - - -	84013	NORTH CENTRAL BIBLE COLLEGE
- - - - -	84015	PILLSBURY COLLEGE

Programs in communication technologies are designed to prepare people to give technological support and assistance to professionals in fields of communications, such as educational media, the motion picture industry, photography, and radio and television. Programs emphasize the mechanical, scientific, and technical aspects of communications.

Many community colleges and private training schools offer specialized programs in one or more of the communication technologies. Some schools offer short programs in electronic theory which are designed to prepare people to take the Federal Communications Commission (FCC) Radiotelephone License Examination. Many four-year colleges and universities offer bachelor's, master's, and doctoral degrees in communication technologies. Some students, such as those in educational media, also take education courses in order to be certified as teachers. For a description of professional programs in communications, see PROG 193 Journalism and Communications.

---PROGRAM ADMISSION: Requirements vary with school. A high school diploma or its equivalent is normally required.

---TYPICAL COURSE WORK: Programs vary greatly with school, length of program, and emphasis. Longer programs include all or most of the following:

Mass Media	Broadcasting Fundamentals
Transmitters	Electricity and Electronics
Script Writing	Trouble Shooting Techniques
Speech	Radio-T.V. Copywriting

Instruction includes lectures, class discussion, research, and report and essay writing. Depending on emphasis, programs also include work in laboratories, studios, and in the field.

---GRADUATION REQUIREMENTS: Requirements vary with school, length of program, and area of specialization. See school catalogs for more information.

---THINGS TO KNOW: Announcers and technicians are subject to licensing requirements set by the FCC. For broadcast technicians see PREP 5628. For radio-television announcers see PREP 9824.

---RELATED PROGRAMS: PROG 193 Journalism and Communications, 317 Photographic Arts, 443 Speech, 236 Secondary Education.

---DIRECTLY RELATED OCCUPATIONS: DESC 5628 Broadcast Technicians, 3168 Television/Radio Service Technicians, 1426 Dispatchers.

ASSOCIATED OCCUPATIONS: DESC 9824 Radio and Television Announcers, 8453 Elementary School Teachers, 8127 Speech Pathologists, and 8129 Audiologists, 8457 Secondary School Teachers.

---For Licensing Information Contact:
 Federal Communications Commission
 (District Office)
 316 North Robert Street
 St. Paul, MN 55101
 (612) 725-7810

CIPS: 10.

SCHOOLS:

- - - - - 25004 AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'RADIO AND/OR TELEVISION BROADCASTING TECHNICIAN' PROGRAM PREPARES INDIVIDUALS TO PERFORM TASKS IN RADIO AND/OR TELEVISION NEWS PROGRAMS WHICH ARE PRODUCED AND BROADCASTED. INSTRUCTION IN ACTUAL PERFORMANCE OR SIMULATED PERFORMANCE, TO TRAIN STUDENTS IN JOB REQUIREMENTS, IS INCLUDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 10 1/2 MONTHS LONG.

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'RADIO AND/OR TELEVISION BROADCASTING TECHNICIAN' PROGRAM PREPARES INDIVIDUALS TO PERFORM TASKS IN RADIO AND/OR TELEVISION NEWS PROGRAMS WHICH ARE PRODUCED AND BROADCASTED. INSTRUCTION IN ACTUAL PERFORMANCE OR SIMULATED PERFORMANCE, TO TRAIN STUDENTS IN JOB REQUIREMENTS, IS INCLUDED.

--- DEGREES OFFERED: A CERTIFICATE OR DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED. STUDENTS WHO COMPLETE THE TECHNICAL PORTION WILL BE QUALIFIED TO WRITE THE GENERAL FCC LICENSE EXAM.

--- LENGTH OF PROGRAM: THE BROADCAST TECHNOLOGY PROGRAM IS FROM 42 WEEKS UP TO 84 WEEKS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$150 FOR BOOKS, SUPPLIES AND EQUIPMENT.

- - - - - 25016 JACKSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'TELEPHONE COMMUNICATIONS' PROGRAM IS A NEW OR REVISED PROGRAM FOR WHICH THERE WAS NO AVAILABLE DESCRIPTION AT THE UPDATE OF THIS EDITION OF MCIS. PLEASE CONTACT THE AVTI FOR INFORMATION ON THIS PROGRAM.

--- LENGTH OF PROGRAM: THIS IS AN 11 MONTH PROGRAM.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'RADIO AND TELEVISION PRODUCTION TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT BROADCAST MANAGERS IN THE PRODUCTION OF MATERIALS AND THE ACTUAL PRODUCTION AND BROADCASTING OF MATERIALS OR PROGRAMS. INSTRUCTION IN THE EQUIPMENT, PROCESSES, AND PROCEDURES USED IN PRODUCING AND MAKING RADIO OR TELEVISION BROADCASTS; VARIOUS COMPONENTS, SPECIALIZED EQUIPMENT AND SYSTEMS OF DEVICES EMPLOYED IN BROADCAST OPERATIONS; ELECTRONIC COMMUNICATION WITH RADIO AND TELEVISION; SCRIPT AND PROGRAM PREPARATION; PHOTOGRAPHIC AND AUDIO-RECORDING OF MATERIAL TO BE BROADCAST; MONITORING, MODULATING, AND CONTROLLING THE BROADCAST PROCESSES AND RECORDING AND STORING BROADCAST MATERIALS, AS WELL AS ENGINEERING THIRD CLASS FCC LICENSE STUDY, IS INCLUDED.

--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES 12 MONTHS TO COMPLETE.

--- SPECIAL COSTS: COSTS ARE \$240 FOR BOOKS, SUPPLIES AND EQUIPMENT.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'RADIO AND TELEVISION PRODUCTION TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT BROADCAST MANAGERS IN THE PRODUCTION OF MATERIALS AND THE ACTUAL PRODUCTION AND BROADCASTING OF

MATERIALS OR PROGRAMS. INSTRUCTION IN THE EQUIPMENT, PROCESSES, AND PROCEDURES USED IN PRODUCING AND MAKING RADIO OR TELEVISION BROADCASTS; VARIOUS COMPONENTS, SPECIALIZED EQUIPMENT AND SYSTEMS OF DEVICES EMPLOYED IN BROADCAST OPERATIONS; ELECTRONIC COMMUNICATION WITH RADIO AND TELEVISION; SCRIPT AND PROGRAM PREPARATION; PHOTOGRAPHIC AND AUDIO-RECORDING OF MATERIAL TO BE BROADCAST; MONITORING, MODULATING, AND CONTROLLING THE BROADCAST PROCESSES AND RECORDING AND STORING BROADCAST MATERIALS, AS WELL AS ENGINEERING THIRD CLASS FCC LICENSE STUDY, IS INCLUDED.

--- DEGREES OFFERED: A DIPLOMA OF RECOGNITION IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$105 FOR BOOKS AND SUPPLIES.

- - - - - 25028 THIEF RIVER FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'RADIO AND/OR TELEVISION BROADCASTING TECHNICIAN' PROGRAM PREPARES INDIVIDUALS TO PERFORM TASKS IN RADIO AND/OR TELEVISION NEWS PROGRAMS WHICH ARE PRODUCED AND BROADCASTED. INSTRUCTION IN ACTUAL PERFORMANCE OR SIMULATED PERFORMANCE, TO TRAIN STUDENTS IN JOB REQUIREMENTS, IS INCLUDED.

--- DEGREES OFFERED: DEGREES OF OCCUPATIONAL PROFICIENCY ARE AWARDED.

--- LENGTH OF PROGRAM: THE PROGRAM LASTS 36 WEEKS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE APPROXIMATELY \$200 FOR BOOKS AND MISCELLANEOUS.

- - - - - 26073 ST. CLOUD STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: A 'PHOTOGRAPHIC ENGINEERING TECHNOLOGY' PROGRAM AND A 'PHOTOGRAPHIC SCIENCE AND INSTRUMENTATION' PROGRAM ARE OFFERED BY THE TECHNOLOGY DEPARTMENT. THE PROGRAMS INCLUDE CLASSES ON THE TECHNIQUES, PROCESSES, AND EQUIPMENT USED IN PHOTO PROCESSING PLUS OTHER COURSES SUCH AS CHEMISTRY AND MATH.

--- DEGREES OFFERED: THE TECHNOLOGY DEPARTMENT OFFERS AN ASSOCIATE OF SCIENCE DEGREE IN PHOTOGRAPHIC ENGINEERING TECHNOLOGY AND PHOTORONICS, A BACHELOR OF SCIENCE DEGREE IN PHOTOGRAPHIC SCIENCE AND INSTRUMENTATION, AND PHOTOGRAPHIC ENGINEERING TECHNOLOGY.

- - - - - 82087 SCHOOL OF COMMUNICATION ARTS

--- OBJECTIVES OF THE PROGRAM: THE 'RADIO/T.V. BROADCASTING' PROGRAM DEVELOPS A STUDENT'S SKILLS IN VOICE AND PERSONALITY TECHNIQUES AND PROVIDES AUDIO AND TELEVISION PRODUCTION EXPERIENCE IN MANAGEMENT AND PROGRAMMING.

--- DEGREES OFFERED: A DIPLOMA OF COMPLETION IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 24 WEEKS LONG.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

196 COMMUNICATION TECHNOLOGIES TRANSFER PROGRAMS:

- - - - - 27139 AUSTIN COMMUNITY COLLEGE
- - - - - 27140 BRAINERD COMMUNITY COLLEGE
- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27144 ITASCA COMMUNITY COLLEGE
- - - - - 27145 WILLMAR COMMUNITY COLLEGE
- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE
- - - - - 27147 VERMILION COMMUNITY COLLEGE
- - - - - 27148 ROCHESTER COMMUNITY COLLEGE

- - - - - 27150 MESABI COMMUNITY COLLEGE
- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE
- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE
- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE
- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE
- - - - - 27156 NORMANDALE COMMUNITY COLLEGE
- - - - - 27157 INVER HILLS COMMUNITY COLLEGE
- - - - - 83002 CROSIER SEMINARY JUNIOR COLLEGE
- - - - - 84013 NORTH CENTRAL BIBLE COLLEGE
- - - - - 84015 PILLSBURY COLLEGE

211 COMPUTER AND INFORMATION SCIENCE

Computer and information science programs intend to prepare people to design and develop computer hardware (equipment) and software (program logic) systems. Programs include the study of computer languages, software design, computer architecture, and the application of computer technology to science, engineering, and information processing. Programs may include instruction in the design of graphics, mathematical and simulation models, and large scale programs used for processing and retrieving information.

Many four year colleges and universities offer bachelor's degrees in computer and information science. These programs usually include detailed courses in computer design, theory, and programming languages. Master's and doctoral degree programs are also offered. Advanced degree programs help prepare people to teach and conduct research in settings such as universities, laboratories, and industries. Some community colleges offer the first two years of bachelor's degree requirements which can be transferred to a four year college or university. (For a description of programs in data processing, computer operations, and data entry, see PROG 214.)

---PROGRAM ADMISSION: A high school diploma or its equivalent is normally required for admission to undergraduate programs. Because of the current high demand for programs in computer science, many schools have additional requirements for program entry. A bachelor's degree in computer science, or in a related field such as mathematics, physics, or electronics, is usually required for admission to graduate programs in computer and information science. See school catalogs for more information.

---TYPICAL COURSE WORK: Course work varies with school and specialization. Typical course work includes:

Math/Calculus/Statistics	Operating Systems
Computer Architecture	Computer Languages
Logic Systems	Microprocessors
Digital Circuitry	Data Structures
Systems Analysis	Graphics

Extensive lab work, to gain experience in a wide variety of computer languages, is usually included. Programs emphasizing computer hardware design and development may include courses in electrical engineering. See school catalogs for more complete descriptions of course work.

---GRADUATION REQUIREMENTS: Requirements vary. See school catalogs for more information.

---RELATED PROGRAMS: PROG 145 Business Management and Administration, 214 Data Processing, 292 Electricity and Electronics Repair, 251 Engineering.

---DIRECTLY RELATED OCCUPATIONS: DESC 1681 Computer Programmers, 1682 Systems Analysts.

ASSOCIATED OCCUPATIONS: DESC 1686 Computer Operators, 5634 Computer Service Technicians.

CIPS: 11.

SCHOOLS:

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: 'COMPUTER SCIENCE' PROGRAMS ARE OFFERED THROUGH THE COLLEGE OF LIBERAL ARTS AND THE INSTITUTE OF TECHNOLOGY. BOTH PROGRAMS OFFER A BROAD FOUNDATION IN COMPUTER SCIENCE, BUT THE I.T. PROGRAM IS MORE TECHNICAL THAN THE C.L.A. PROGRAM. THE I.T. PROGRAM CAN BE COMPLETED THROUGH EXTENSION CLASSES. CONTINUING EDUCATION AND EXTENSION ALSO OFFERS 2 SHORTER PROGRAMS IN THIS FIELD. THE 'INFORMATION SYSTEMS ANALYSIS AND DESIGN' PROGRAM A COOPERATIVE PROGRAM BETWEEN C.E.E. AND THE SCHOOL OF MANAGEMENT, (54 CREDITS) COVERS INFORMATION PROCESSING AND COMPUTER PROGRAMMING. THE 'COMPUTER SCIENCE' PROGRAM (45 CREDITS OR 90 CREDITS) IS HIGHLY TECHNICAL AND CONCENTRATED.

--- DEGREES OFFERED: THE BACHELOR OF ARTS DEGREE IS OFFERED IN THE C.L.A. PROGRAM AND THE BACHELOR OF COMPUTER SCIENCE IN THE I.T. PROGRAM. A CERTIFICATE IS AWARDED FOR THE INFORMATION SYSTEMS ANALYSIS AND DESIGN PROGRAM. AN UNDERGRADUATE DEVELOPMENT CERTIFICATE (45 OR 90 CREDITS) IS AWARDED FOR THE CONTINUING EDUCATION AND EXTENSION COMPUTER SCIENCE PROGRAM. AT THE GRADUATE LEVEL, THE MASTER OF SCIENCE AND DOCTOR OF PHILOSOPHY DEGREES ARE OFFERED IN COMPUTER AND INFORMATION SCIENCE.

Data processing programs intend to prepare people to use computer technology in business-related activities. Some programs are designed to prepare people to write, test, monitor, and maintain business-related computer programs. Other programs focus on how to operate computers and related equipment.

Community colleges and vocational schools offer programs ranging from a few weeks to two years in length that are designed to prepare students for jobs as data entry or keypunch operators, computer operators, or computer programmers. Some colleges and universities offer bachelor's degree programs in data processing which focus on programming methods for collecting, organizing, processing, and disseminating information. Graduates of these programs are prepared with a broad base of knowledge in computer languages and in the applications of the computer to business activities. (For a description of programs in computer and information science, see PROG 211.)

---PROGRAM ADMISSION: Short courses usually require that the applicant already have some typing skills (usually 40 wpm). Community colleges normally require that applicants have a high school diploma or the equivalent.

---TYPICAL COURSE WORK: Course work for data processing programs varies extensively with type of school, program emphasis, and length of program. In addition to lectures and reading, most programs include a great deal of hands-on experience with computers and related equipment.

Typical course work for data entry programs:

Business Math	Introduction to Data
Typing	Processing
Office Machines	Keypunch Operations
Accounting	

Typical course work for computer operator programs:

Business and Computer Math
 Programming Languages
 Computer Operating Systems
 Data Entry

Typical course work for computer programmer programs:

Introduction to Data Processing
 Computer Languages
 Program Design
 Data Processing Systems
 Documentation and Flowcharting

Bachelor's degree programs also include basic requirements such as English composition, speech, and health.

---GRADUATION REQUIREMENTS: Requirements vary with school and length of program. See school catalogs for more information.

---RELATED PROGRAMS: PROG 211 Computer and Information Science, 158 Secretarial Studies and Office Administration.

---DIRECTLY RELATED OCCUPATIONS: DESC 1686 Computer Operators, 1681 Computer Programmers, 1688 Data Entry Operators.

ASSOCIATED OCCUPATIONS: DESC 1682 Systems Analysts, 5634 Computer

Service Technicians, 1638 Office Machine Operators.

CIPS: 07.03

SCHOOLS:

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'COMPUTER PROGRAMMING' PROGRAM TRAINS INDIVIDUALS IN THE METHODS AND PROCEDURES USED IN FLOW CHARTING AND WRITING INSTRUCTIONS IN COMPUTER LANGUAGE FOR THE DIRECTION OF COMPUTER OPERATION IN THE SOLUTION OF A PROBLEM.

--- DEGREES OFFERED: A DIPLOMA IN COMPUTER PROGRAMMING IS OFFERED.

--- LENGTH OF PROGRAM: THE COMPUTER PROGRAMMING PROGRAM IS 19 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$140 FOR BOOKS THE FIRST YEAR AND \$140 THE SECOND YEAR.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'DATA PROCESSING' PROGRAM PREPARES INDIVIDUALS TO ANALYZE AND DESIGN DATA PROCESSING SYSTEM CONFIGURATIONS; WRITE, TEST, MONITOR, DEBUG, AND MAINTAIN DATA PROCESSING PROGRAMS; AND OPERATE COMPUTERS AND PERIPHERAL AND DATA ENTRY EQUIPMENT.

THE 'BUSINESS DATA ENTRY EQUIPMENT OPERATION' PROGRAM PREPARES INDIVIDUALS TO OPERATE KEYPUNCH OR SPECIAL PURPOSE KEY ENTRY DEVICES TO CONVERT SOURCE DOCUMENTS TO MACHINE INPUT MEDIA FOR ELECTRONIC DATA PROCESSING, VERIFY AND CORRECT DATA, AND MONITOR EQUIPMENT DURING OPERATION.

--- DEGREES OFFERED: A DEGREE OR CERTIFICATE OF OCCUPATIONAL PROFICIENCY ARE OFFERED.

--- LENGTH OF THE PROGRAM: THE DATA PROCESSING PROGRAM IS 22 MONTHS LONG. THE BUSINESS DATA ENTRY PROGRAM IS 11 WEEKS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$100 FOR BOOKS AND SUPPLIES.

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'DATA PROCESSING' PROGRAM PREPARES INDIVIDUALS TO ANALYZE AND DESIGN DATA PROCESSING SYSTEM CONFIGURATIONS; WRITE, TEST, MONITOR, DEBUG, AND MAINTAIN DATA PROCESSING PROGRAMS; AND OPERATE COMPUTERS AND PERIPHERAL AND DATA ENTRY EQUIPMENT.

--- DEGREES OFFERED: A CERTIFICATE OR DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE DATA PROCESSING PROGRAM IS UP TO 92 WEEKS LONG.

--- SPECIAL COSTS: COSTS INCLUDE \$150 FOR BOOKS, SUPPLIES AND EQUIPMENT.

- - - - - 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'DATA PROCESSING' PROGRAM PREPARES INDIVIDUALS TO ANALYZE AND DESIGN DATA PROCESSING SYSTEM CONFIGURATIONS; WRITE, TEST, MONITOR, DEBUG, AND MAINTAIN DATA PROCESSING PROGRAMS; AND OPERATE COMPUTERS AND PERIPHERAL AND DATA ENTRY EQUIPMENT.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS AWARDED.

--- LENGTH OF PROGRAM: DATA PROCESSING IS A 42-84 WEEK PROGRAM.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$240 FOR MATERIALS AND SUPPLIES.

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE

---OBJECTIVES OF THE PROGRAM: THE 'DATA PROCESSING' PROGRAM PREPARES INDIVIDUALS TO ANALYZE AND DESIGN DATA PROCESSING SYSTEM CONFIGURATIONS; WRITE, TEST, MONITOR, DEBUG, AND MAINTAIN DATA PROCESSING PROGRAMS; AND OPERATE COMPUTERS AND PERIPHERAL AND DATA ENTRY EQUIPMENT.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.
--- LENGTH OF PROGRAM: THE DATA PROCESSING PROGRAM IS 12-24 MONTHS LONG.
--- SPECIAL COSTS: COSTS WILL INCLUDE ABOUT \$150 TO \$300 FOR BOOKS.

- - - - - 25019 MOORHEAD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'DATA PROCESSING' PROGRAM PREPARES INDIVIDUALS TO ANALYZE AND DESIGN DATA PROCESSING SYSTEM CONFIGURATIONS; WRITE, TEST, MONITOR, DEBUG, AND MAINTAIN DATA PROCESSING PROGRAMS; AND OPERATE COMPUTERS AND PERIPHERAL AND DATA ENTRY EQUIPMENT. THE 'BUSINESS DATA ENTRY EQUIPMENT OPERATION' PROGRAM PREPARES INDIVIDUALS TO OPERATE KEYPUNCH OR SPECIAL PURPOSE KEY ENTRY DEVICES TO CONVERT SOURCE DOCUMENTS TO MACHINE INPUT MEDIA FOR ELECTRONIC DATA PROCESSING, VERIFY AND CORRECT DATA, AND MONITOR EQUIPMENT DURING OPERATION.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.
--- LENGTH OF PROGRAM: THESE PROGRAMS ARE 3-20 MONTHS LONG.
--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS.

- - - - - 25020 PINE TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'DATA PROCESSING' PROGRAM PREPARES INDIVIDUALS TO ANALYZE AND DESIGN DATA PROCESSING SYSTEM CONFIGURATIONS; WRITE, TEST, MONITOR, DEBUG, AND MAINTAIN DATA PROCESSING PROGRAMS; AND OPERATE COMPUTERS AND PERIPHERAL AND DATA ENTRY EQUIPMENT.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES UP TO 150 HOURS TO COMPLETE.
--- SPECIAL COSTS: COSTS WILL INCLUDE ABOUT \$25 TO \$30.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'COMPUTER OPERATIONS' PROGRAM TRAINS INDIVIDUALS IN THE CODING, PROCESSING AND STORING OF DATA THROUGH REPETITIOUS AND HIGHLY COMPLEX MATHEMATICAL OPERATIONS AT HIGH SPEED, AND IN ACCORDANCE WITH STRICTLY DEFINED SYSTEMS AND PROCEDURES. THE 'COMPUTER PROGRAMMING' PROGRAM TRAINS INDIVIDUALS IN THE METHODS AND PROCEDURES USED IN FLOW CHARTING AND WRITING INSTRUCTIONS IN COMPUTER LANGUAGE FOR THE DIRECTION OF COMPUTER OPERATION IN THE SOLUTION OF A PROBLEM.

--- DEGREES OFFERED: A DIPLOMA, DEGREE OF OCCUPATIONAL PROFICIENCY, OR CERTIFICATE OF COMPLETION IS AWARDED TO STUDENTS WHO SUCCESSFULLY COMPLETE EACH PROGRAM.

--- LENGTH OF PROGRAM: THE COMPUTER OPERATIONS PROGRAM IS 11 MONTHS LONG, THE COMPUTER PROGRAMMING PROGRAM IS 22 MONTHS LONG, THE DATA ENTRY OPERATIONS PROGRAM IS 6 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$150 FOR COMPUTER OPERATIONS AND \$200 FOR COMPUTER PROGRAMMING FOR BOOKS, SUPPLIES AND EQUIPMENT, \$50 FOR DATA ENTRY OPERATIONS.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'COMPUTER OPERATIONS' PROGRAM TRAINS INDIVIDUALS IN THE CODING, PROCESSING AND STORING OF DATA THROUGH REPETITIOUS AND HIGHLY COMPLEX MATHEMATICAL OPERATIONS AT HIGH SPEED, AND IN ACCORDANCE WITH STRICTLY DEFINED SYSTEMS AND PROCEDURES.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.
--- LENGTH OF PROGRAM: THIS IS AN 22 MONTH PROGRAM.
--- SPECIAL COSTS: PROGRAM RELATED COSTS ARE \$300 FOR BOOKS AND SUPPLIES.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'DATA PROCESSING' PROGRAM PREPARES

INDIVIDUALS TO ANALYZE AND DESIGN DATA PROCESSING SYSTEM CONFIGURATIONS; WRITE, TEST, MONITOR, DEBUG, AND MAINTAIN DATA PROCESSING PROGRAMS; AND OPERATE COMPUTERS AND PERIPHERAL AND DATA ENTRY EQUIPMENT.

THE 'BUSINESS DATA ENTRY EQUIPMENT OPERATION' PROGRAM PREPARES INDIVIDUALS TO OPERATE KEYPUNCH OR SPECIAL PURPOSE KEY ENTRY DEVICES TO CONVERT SOURCE DOCUMENTS TO MACHINE INPUT MEDIA FOR ELECTRONIC DATA PROCESSING, VERIFY AND CORRECT DATA, AND MONITOR EQUIPMENT DURING OPERATION.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: DATA PROCESSING IS AN 11 OR 22 MONTH PROGRAM. THE DATA ENTRY OPERATOR PROGRAM IS 3 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE \$225 FOR BOOKS AND SUPPLIES FOR THE COMPLETE (22 MONTH) DATA PROCESSING PROGRAM. DATA ENTRY OPERATOR PROGRAM COSTS ARE ABOUT \$100.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'DATA PROCESSING' PROGRAM PREPARES INDIVIDUALS TO ANALYZE AND DESIGN DATA PROCESSING SYSTEM CONFIGURATIONS; WRITE, TEST, MONITOR, DEBUG, AND MAINTAIN DATA PROCESSING PROGRAMS; AND OPERATE COMPUTERS AND PERIPHERAL AND DATA ENTRY EQUIPMENT.

--- DEGREES OFFERED: A DIPLOMA OF RECOGNITION IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 20 MONTHS LONG.

--- SPECIAL COSTS: BOOKS AND SUPPLIES COST \$150 FOR A 12-MONTH PROGRAM.

- - - - - 25033 RED WING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'COMPUTER PROGRAMMING' PROGRAM PREPARES INDIVIDUALS TO CONVERT PROBLEMS INTO DETAILED FLOW CHARTS; CODE INTO COMPUTER LANGUAGE; AND DESIGN PROGRAMS FOR SPECIFIC USES AND MACHINES.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: COMPUTER PROGRAMMING IS A 22 MONTH PROGRAM.

--- SPECIAL COSTS: BOOKS AND SUPPLIES WILL COST ABOUT \$250.

- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'DATA PROCESSING' PROGRAM TRAINS STUDENTS FOR WORK AS PROGRAMMERS OR PROGRAMMER/ANALYSTS. STUDENTS ACQUIRE AN UNDERSTANDING OF COMPUTER PROGRAMMING AND SYSTEMS ANALYSIS AS WELL AS AN UNDERSTANDING OF DATA PROCESSING EQUIPMENT. THEY ALSO COMPLETE COURSES IN THE BEHAVIORAL AND SOCIAL SCIENCES, ENGLISH, HUMANITIES, MATH/SCIENCE, AND PHYSICAL EDUCATION/PUBLIC HEALTH.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR (90 QUARTER CREDITS) PROGRAM.

- - - - - 27156 NORMANDALE COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'COMPUTER PROGRAMMING TECHNOLOGY' PROGRAM PREPARES ENTRY LEVEL PROGRAMMERS OR ANALYST/PROGRAMMERS FOR BUSINESS, INDUSTRY, AND EDUCATION. THE PROGRAM IS ALSO DESIGNED TO UPGRADE THE SKILLS OF PROFESSIONALS IN THE LOCAL COMMUNITY; AND TO PERMIT STUDENTS TO TRANSFER TO SELECTED FOUR-YEAR INSTITUTIONS. IN ADDITION TO COMPUTER COURSES, THE PROGRAM INCLUDES GENERAL EDUCATION COURSES AND AN INTERNSHIP.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS COMPUTER SYSTEMS' PROGRAM

PREPARES STUDENTS FOR WORK AS JUNIOR SYSTEMS ANALYSTS IN BUSINESSES WHICH USE COMPUTERS. COURSES INCLUDE: ACCOUNTING, MARKETING, DATA PROCESSING, COMPUTER PROGRAMMING, AND SYSTEMS TECHNOLOGY AS WELL AS A SIX CREDIT INTERNSHIP.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE WITH A MAJOR IN BUSINESS COMPUTER SYSTEMS IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 82006 CONTROL DATA INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'COMPUTER TECHNOLOGY' COURSE IS DESIGNED TO TRAIN STUDENTS FOR CAREERS AS COMPUTER TECHNICIANS. STUDENTS TAKE COURSES IN BASIC ELECTRONICS AND THEN STUDY THE THEORY AND MAINTENANCE OF COMPUTER SYSTEMS. THE 'COMPUTER PROGRAMMING AND OPERATIONS' COURSE IS DESIGNED TO TRAIN STUDENTS FOR ENTRY LEVEL EMPLOYMENT IN THE DATA PROCESSING FIELD. STUDENTS LEARN TO PROGRAM IN FOUR DIFFERENT PROGRAMMING LANGUAGES AND ALSO HOW TO OPERATE A COMPUTER. THE 'OFFICE TECHNOLOGY' PROGRAM FOCUSES ON TWO MAJOR METHODS OF HANDLING INFORMATION: WORD PROCESSING AND DATA PROCESSING.

--- DEGREES OFFERED: A CERTIFICATE IS OFFERED.

--- LENGTH OF PROGRAM: THE COMPUTER TECHNOLOGY COURSE IS 8 MONTHS LONG: THE COMPUTER PROGRAMMING AND OPERATIONS COURSES IS 6 MONTHS LONG. OFFICE TECHNOLOGY IS 4 MONTHS LONG. EVENING COMPUTER PROGRAMMING AND COMPUTER TECHNOLOGY COURSES ARE 9 AND 11 MONTHS LONG.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 82014 GLOBE COLLEGE OF BUSINESS

--- OBJECTIVES OF THE PROGRAM: IN THE 'COMPUTER PROGRAMMING SPECIALIST' PROGRAM, GLOBE OFFERS TRAINING ON PRIME COMPUTERS. STUDENTS LEARN FIVE LANGUAGES: BASIC, FORTRAN, COBOL, RPG II AND PASCAL.

--- DEGREES OFFERED: A CERTIFICATE IS AWARDED UPON SUCCESSFUL COMPLETION OF THE PROGRAM.

--- LENGTH OF PROGRAM: 35 WEEKS IN THE DAY SCHOOL; 70 WEEKS IN THE NIGHT SCHOOL.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS INCLUDING TEXTBOOKS ARE INCLUDED IN THE TUITION FEE.

- - - - - 82027 MINNESOTA SCHOOL OF BUSINESS

--- OBJECTIVES OF THE PROGRAM: THE 'COMPUTER PROGRAMMING AND OPERATIONS' PROGRAM IS DESIGNED FOR STUDENTS WHO WISH TO PURSUE CAREERS IN THE DATA PROCESSING FIELD. COMMON AREAS OF STUDY ARE ACCOUNTING, PRINCIPLES OF ELECTRONIC DATA PROCESSING, AND REPORT PROGRAM GENERATOR.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE COMPUTER PROGRAMMING AND OPERATIONS PROGRAM IS 36 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS AND EQUIPMENT.

- - - - - 82030 NORTHERN TECHNICAL SCHOOL OF BUSINESS

--- OBJECTIVES OF THE PROGRAM: THE 'COMPUTER PROGRAMMING' PROGRAM STRESSES KNOWLEDGE OF WHAT A COMPUTER CAN DO, HOW IT OPERATES, THE LANGUAGES USED TO GIVE IT INSTRUCTIONS, AND PRACTICAL APPLICATIONS IN DESIGNING AND IMPLEMENTING PROGRAMS. A SOUND BUSINESS BACKGROUND IS ALSO INCLUDED, PARTICULARLY IN THE AREAS OF ACCOUNTING AND BASIC BUSINESS SKILLS. STUDENTS ARE PREPARED FOR ENTRY LEVEL POSITIONS IN THE COMPUTER PROGRAMMING FIELD.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED UPON COMPLETION.
--- LENGTH OF PROGRAM: A COMPUTER PROGRAMMING PROGRAM IS 48 WEEKS LONG.

- - - - - 82038 RASMUSSEN BUSINESS COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'BUSINESS COMPUTER PROGRAMMING' COURSE PREPARES STUDENTS FOR POSITIONS AS COMPUTER PROGRAMMERS, COMPUTER OPERATORS AND SYSTEMS ANALYST TRAINEES. STUDENTS COMPLETE BUSINESS COURSES IN MATH, LAW, ACCOUNTING AND ENGLISH AS WELL AS THE STUDY OF COMPUTER LANGUAGES.

--- DEGREES OFFERED: GRADUATES RECEIVE A DIPLOMA.

--- LENGTH OF PROGRAM: THE PROGRAM IS 48 WEEKS LONG.

- - - - - 83003 GOLDEN VALLEY LUTHERAN COLLEGE

--- OBJECTIVES OF THE PROGRAM: 'COMPUTER TRAINING' IS A COOPERATIVE PROGRAM BETWEEN GOLDEN VALLEY AND CONTROL DATA CORPORATION. THE PROGRAM INTENDS TO TRAIN STUDENTS AS COMPUTER TECHNICIANS AND PROGRAMMERS. STUDENT SPEND AT LEAST 1 YEAR AT GOLDEN VALLEY TAKING BIBLICAL AND LIBERAL ARTS COURSES. THEY ALSO COMPLETE TECHNICAL STUDIES AT CONTROL DATA. THE CREDITS EARNED THERE APPLY TO THE DEGREE PROGRAM AT GOLDEN VALLEY.

--- DEGREES OFFERED: GRADUATES OF THIS PROGRAM RECEIVE THE ASSOCIATE IN ARTS DEGREE.

--- LENGTH OF PROGRAM: THIS IS A 2-YEAR PROGRAM.

- - - - - 83004 SAINT MARY'S JUNIOR COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'HEALTH CARE COMPUTING' PROGRAM PREPARES GRADUATES TO USE COMPUTERS AS ADMINISTRATIVE, CLINICAL, AND INSTRUCTIONAL TOOLS IN THE DELIVERY OF HEALTH CARE SERVICES. STUDENTS WILL LEARN THE COMPUTING SKILLS OF WORD PROCESSING, DATA BASE MANAGEMENT, GRAPHICS, AND REPORT GENERATION. THEY WILL GAIN AN UNDERSTANDING OF DATA PROCESSING, FINANCIAL ANALYSIS, INFORMATION MANAGEMENT AND DATA COMMUNICATIONS. WRITTEN AND ORAL COMMUNICATION SKILLS WILL BE STRESSED. STUDENTS WILL ALSO LEARN INSERVICE TEACHING METHODS.

--- DEGREES OFFERED: THIS PROGRAM MAY BE TAKEN FOR AN ASSOCIATE OF APPLIED SCIENCE DEGREE OR A CERTIFICATE.

--- LENGTH OF PROGRAM: BOTH THE ASSOCIATE DEGREE AND CERTIFICATE OPTIONS ARE 7 QUARTERS.

214 DATA PROCESSING TRANSFER PROGRAMS:

- - - - - 27139 AUSTIN COMMUNITY COLLEGE
- - - - - 27140 BRAINERD COMMUNITY COLLEGE
- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27144 ITASCA COMMUNITY COLLEGE
- - - - - 27145 WILLMAR COMMUNITY COLLEGE
- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE
- - - - - 27148 ROCHESTER COMMUNITY COLLEGE
- - - - - 27149 NORTHLAND COMMUNITY COLLEGE
- - - - - 27150 MESABI COMMUNITY COLLEGE
- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE
- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE
- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE
- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE
- - - - - 27157 INVER HILLS COMMUNITY COLLEGE
- - - - - 81003 UNIVERSITY OF MINNESOTA (MORRIS)
- - - - - 83002 CROSIER SEMINARY JUNIOR COLLEGE

- - - - - 84013 NORTH CENTRAL BIBLE COLLEGE
- - - - - 84014 NORTHWESTERN COLLEGE
- - - - - 84015 PILLSBURY COLLEGE
- - - - - 84021 ST. PAUL BIBLE COLLEGE

221 FLORAL DESIGN

Floral design programs intend to teach people to design floral arrangements and decorations using various containers, flowers, and accessories. Some programs provide training in plant cultivation and care, retail and wholesale marketing, and shop operations. Most floral design programs are offered at vocational or technical schools and private floral design schools.

---PROGRAM ADMISSION: A design and art background is recommended. Courses in business arithmetic, bookkeeping, and sales are helpful.

---TYPICAL COURSE WORK: Instruction includes lectures, technical reading, and laboratory and practical experience. Most floral design programs include courses in the following:

Floral Designing	Retail Floristry
Plant Identification	Soils and Fertilizers
Plant Care	Greenhouse Crops

Other courses usually relate to the business aspects of floristry such as sales skill, business math and accounting, marketing, and display. Associate degree programs may include general education courses such as natural sciences, physical education, and social sciences.

---GRADUATION REQUIREMENTS: Requirements vary. See school catalogs for more information.

---THINGS TO KNOW: Some programs offer opportunities for on-the-job training with a practicing florist or in a greenhouse.

---RELATED PROGRAMS: PROG 111 Agricultural Production and Services, 113 Soil and Plant Sciences, 115 Horticulture and Landscaping, 145 Business Management and Administration, 146 Marketing and Sales.

---DIRECTLY RELATED OCCUPATION: DESC 4146 Floral Designers.

ASSOCIATED OCCUPATIONS: DESC 4136 Groundskeepers, 1157 Store Managers, 2613 Horticulturists.

CIPS: 20.0504

SCHOOLS:

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'RETAIL FLORAL DESIGN AND MARKETING' PROGRAM PREPARES INDIVIDUALS TO DESIGN AND MARKET FLORAL ARRANGEMENTS AND DECORATIONS. INSTRUCTION INCLUDES SELECTING APPROPRIATE FLOWERS AND ACCESSORIES FOR FLORAL DECORATIONS FOR A VARIETY OF SETTINGS; MERCHANDISING FLORAL ARRANGEMENTS AND ACCESSORIES; AND OPERATING AND MANAGING RETAIL FLORAL ESTABLISHMENTS.

--- DEGREES OFFERED: A DIPLOMA OF COMPLETION AND A CERTIFICATE OF ATTENDANCE ARE OFFERED.

--- LENGTH OF PROGRAM: THE RETAIL FLORAL PROGRAM IS 10 MONTHS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$105 FOR BOOKS AND \$50 FOR SUPPLIES.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'RETAIL FLORAL DESIGN AND MARKETING'

PROGRAM PREPARES INDIVIDUALS TO DESIGN AND MARKET FLORAL ARRANGEMENTS AND DECORATIONS. INSTRUCTION INCLUDES SELECTING APPROPRIATE FLOWERS AND ACCESSORIES FOR FLORAL DECORATIONS FOR A VARIETY OF SETTINGS; MERCHANDISING FLORAL ARRANGEMENTS AND ACCESSORIES; AND OPERATING AND MANAGING RETAIL FLORAL ESTABLISHMENTS.

--- DEGREES OFFERED: A DIPLOMA OF RECOGNITION IS OFFERED.

--- LENGTH OF PROGRAM: THE FLORAL PROGRAM IS 10 MONTHS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$345 FOR BOOKS AND SUPPLIES.

223 UPHOLSTERING AND LEATHERWORKING

Upholstering and leatherworking programs are designed to teach people how to make and repair upholstery and leather goods. Most people concentrate on one of these two closely related fields. Those concentrating on leatherwork learn to make and repair products such as luggage, belts, handbags, and shoes and boots. Saddlemaking and repair is a specialty within this field. Those concentrating in upholstery learn to work with products such as furniture, automobile seats, mattresses, and caskets.

A few private training schools and community colleges offer one-year (or shorter) programs in upholstery and leatherworking. However, most people learn these skills on the job or through apprenticeship programs. For apprenticeship programs see PROG 631.

---PROGRAM ADMISSION: It is helpful to have experience with machine sewing, shop tools, and basic mathematics.

---TYPICAL COURSE WORK: People in upholstery and leatherworking, depending on specialty, learn about such things as:

Shop Safety	Customer Relations
Mending and Patching	Cutting, Sewing, and Hemming
Color Matching and Dyeing	Padding and Springs
Refinishing	Texturing
Measuring	Chemical Heating
Reupholstering	Slipcovering
Design	Cost Estimating
Pattern Cutting	Leather and Textiles

Instruction is usually hands-on and may include on-the-job training.

---GRADUATION REQUIREMENTS: Requirements vary.

---THINGS TO KNOW: Upholsterers International Union of North America, 25 N. Fourth Street, Philadelphia, PA 19106, represents upholsterers (generally those employed in factories). It may be possible to arrange an apprenticeship through this union. Leatherworking students may wish to contact the Leatherworkers International Union of America, 11 Peabody Square, Peabody, MA 01960.

---RELATED PROGRAMS: PROG 631 Apprenticeship Programs.

---DIRECTLY RELATED OCCUPATIONS: DESC 4494 Furniture Upholsterers, 9869 Artists.

CIPS: 48.03
20.0503
47.0406

SCHOOLS:

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CUSTOM SLIP COVER AND UPHOLSTERY' PROGRAM PREPARES INDIVIDUALS TO UPHOLSTER, REUPHOLSTER, REPAIR AND SLIP COVER HOME FURNISHING ITEMS IN ACCORDANCE WITH CUSTOMER SPECIFICATIONS. INSTRUCTION INCLUDES PRINCIPLES, COLOR SCHEMES, TEXTURES, DESIGNS AND

TEXTILES; SELECTING FABRICS, TRIMS, AND FINISHES APPROPRIATE FOR THE PARTICULAR ITEM(S); MEASURING AND DETERMINING COST OF MATERIALS AND LABOR; IDENTIFYING AND USING CHEMICAL TREATMENTS THAT PROLONG THE LIFE OF FABRICS OR MATERIALS; AND CONSTRUCTING AND USING THE LATEST TECHNIQUES AND METHODS FOR UPHOLSTERING, REUPHOLSTERING, REPAIRING AND SLIP COVERING THE VARIOUS TYPES OF HOME FURNISHINGS.

THE 'SHOE REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR ALL TYPES OF FOOTWEAR. INSTRUCTION INCLUDES REPLACEMENT AND MENDING OF WORN OR TORN PARTS; REPAIRING ORTHOPEDIC FOOTWEAR; REFINISHING AND DYEING LEATHER; AND REPAIRING OTHER LEATHER GOODS SUCH AS HANDBAGS, BELTS AND LUGGAGE.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: SLIP COVER AND UPHOLSTERY IS AN 18-MONTH PROGRAM. SHOE REPAIR IS A 12 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$20 FOR BOOKS, \$45 FOR TOOLS, AND \$4 FOR SAFETY GLASSES FOR UPHOLSTERY AND \$30 FOR BOOKS, \$150 FOR TOOLS AND \$5 FOR SAFETY GLASSES FOR SHOE REPAIR.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CUSTOM SLIPCOVERING AND UPHOLSTERY' PROGRAM PREPARES INDIVIDUALS TO UPHOLSTER, REUPHOLSTER, REPAIR AND SLIP COVER HOME FURNISHING ITEMS IN ACCORDANCE WITH CUSTOMER SPECIFICATIONS. INSTRUCTION INCLUDES ART PRINCIPLES, COLOR SCHEMES, TEXTURES, DESIGNS AND TEXTILES; SELECTING FABRICS, TRIMS, AND FINISHES APPROPRIATE FOR THE PARTICULAR ITEM(S); MEASURING AND DETERMINING COST OF MATERIALS AND LABOR; IDENTIFYING AND USING CHEMICAL TREATMENTS THAT PROLONG THE LIFE OF FABRICS OR MATERIALS; AND CONSTRUCTING AND USING THE LATEST TECHNIQUES AND METHODS FOR UPHOLSTERING, REUPHOLSTERING, REPAIRING AND SLIP COVERING THE VARIOUS TYPES OF HOME FURNISHINGS.

--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: UPHOLSTERY IS AN 18 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$180 FOR BOOKS, SUPPLIES AND EQUIPMENT.

224 ANIMAL GROOMING AND TRAINING

Programs in animal grooming and training intend to prepare people with skills in specialized aspects of animal care, such as dog grooming and training, and horseshoeing and horse training. A few private training schools and a few community colleges offer short (usually three- to four-month) courses in these areas.

---TYPICAL COURSE WORK: Dog grooming course work includes basic grooming skills, care and maintenance of equipment, clipping, brushing, and bathing. Classes are usually small, with emphasis on practical, hands-on experience. The same is true of courses in horse grooming and horseshoeing. Course work includes horse anatomy and physiology, use of hand tools, hoof disorders and diseases, and regular and corrective horseshoeing.

---GRADUATION REQUIREMENTS: Satisfactory completion of program.

---THINGS TO KNOW: Students are usually required to buy their own tools.

---RELATED PROGRAMS: PROG 379 Allied Veterinary Services, 378 Veterinary Medicine, 112 Animal Sciences.

---DIRECTLY RELATED OCCUPATION: DESC 4174 Animal Caretakers.

ASSOCIATED OCCUPATIONS: DESC 4162 Farmers, 2642 Animal Scientists. 4133 Zookeepers.

CIPS: 01.0504
 01.0505
 01.0506

SCHOOLS:

- - - - - 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL
 COLLEGE

---OBJECTIVES OF THE PROGRAM: MAJORS ARE OFFERED IN 'AGRICULTURAL PRODUCTION' (WITH OPTIONS IN CROPS, DAIRY, MEAT ANIMALS AND DIVERSIFIED AGRICULTURE) AND IN 'ANIMAL TECHNOLOGY' (WITH OPTIONS IN DAIRY, MEAT ANIMALS, AND LIGHT HORSE MANAGEMENT). THE AG PRODUCTION MAJOR IS FOR STUDENTS INTERESTED IN FARMING AND FARM MANAGEMENT WHILE THE ANIMAL TECHNOLOGY PROGRAM IS FOR THOSE WHO INTEND TO WORK IN THE LIVESTOCK INDUSTRY.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED WITH MAJORS IN AGRICULTURAL PRODUCTION AND ANIMAL TECHNOLOGY.

--- LENGTH OF PROGRAM: THESE ARE 2 YEAR PROGRAMS.

226 CUSTODIAL SERVICES

Custodial service programs intend to prepare students to clean and care for buildings, including fixtures, furnishings, floor surfaces, and wall surfaces, or to maintain and repair other property. These programs may be found at vocational schools or community colleges. Some training programs offer certificates of completion. Home study courses and apprenticeships may also be available.

Most janitors are trained on the job by a supervisor or coworker. Only a small percentage are graduates of custodial services programs.

---PROGRAM ADMISSION: A background in shop classes is helpful.

---TYPICAL COURSE WORK: Usually includes classroom and shop experience in the following areas:

Using and caring for hand and power tools, such as those used in dusting, mopping, scrubbing, waxing, polishing, refinishing, and wet and dry vacuuming;

Cleaning of toilet rooms, windows, and walls, including applying cleaning agents, protective coats, and disinfectants;

Purchasing custodial supplies.

Students who receive janitorial training through school districts may also be trained in: fire drills and safety measures, water systems, snow removal, and school rules.

---GRADUATION REQUIREMENTS: Satisfactory completion of program.

---THINGS TO KNOW: Several national organizations offer professional training. The International Sanitary Supply Association and the American Institute of Maintenance both offer home study courses for custodians. The Building Service Contractors Association has a certification program for building service managers. The National Executive Housekeepers Association has a collegiate degree program and a 320-hour program. Contact them at the following addresses for more information:

International Sanitary Supply Association, Inc.
5330 North Elston Avenue
Chicago, IL 60630

American Institute of Maintenance
1120 East Chevy Chase Drive
Box 2068
Glendale, CA 91209

Building Service Contractors Association International
1750 Old Meadow Road
McLean, VA 22101

National Executive Housekeepers Association, Inc.
201 Business and Professional Building
Gallipolis, OH 45631

---RELATED PROGRAM: PROG 631 Apprenticeship Programs.

---DIRECTLY RELATED OCCUPATIONS: DESC 3455 Building Custodians, 3424 Hotel

Housekeepers, 3456 Private Household Workers.

CIPS: 20.06

SCHOOLS:

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BUILDING CARE/MAINTENANCE/ SERVICE' PROGRAM PREPARES INDIVIDUALS FOR OCCUPATIONS IN INSTITUTIONS, HOTEL/MOTEL HOUSEKEEPING, COMMERCIAL CLEANING SERVICES, AND MANAGEMENT ASSISTANCE IN VARIOUS COMMERCIAL AND INSTITUTIONAL BUILDINGS. INSTRUCTION INCLUDES CLEANING AND CARE OF FLOORS, FLOOR COVERINGS, WALLS, WOODWORK, WINDOWS, WINDOW TREATMENTS, FURNISHINGS, AND EQUIPMENT; USING CLEANING AND SANITIZING COMPOUNDS, FLUIDS AND CHEMICALS CORRECTLY TO PROTECT HEALTH AND SAFETY OF INDIVIDUALS; USING AND CARING FOR TOOLS; DUSTING, WET MOPPING, SCRUBBING, WAXING, AND REFINISHING SERVICES; CLEANING TOILETS, WINDOWS, WALLS; APPLYING VARIOUS CLEANING AGENTS, PROTECTIVE COATINGS, AND DISINFECTANTS; SCHEDULING WORK; AND PURCHASING CUSTODIAL SUPPLIES.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 10 MONTHS LONG.

--- SPECIAL COSTS: BOOKS AND SUPPLIES WILL COST \$100.00

- - - - - 25012 FARIBAULT AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BUILDING CARE/MAINTENANCE/SERVICE' PROGRAM PREPARES INDIVIDUALS FOR OCCUPATIONS IN INSTITUTIONS, HOTEL/MOTEL HOUSEKEEPING, COMMERCIAL CLEANING SERVICES, AND MANAGEMENT ASSISTANCE IN VARIOUS COMMERCIAL AND INSTITUTIONAL BUILDINGS. INSTRUCTION INCLUDES CLEANING AND CARE OF FLOORS, FLOOR COVERINGS, WALLS, WOODWORK, WINDOWS, WINDOW TREATMENTS, FURNISHINGS, AND EQUIPMENT; USING CLEANING AND SANITIZING COMPOUNDS, FLUIDS AND CHEMICALS CORRECTLY TO PROTECT HEALTH AND SAFETY OF INDIVIDUALS; USING AND CARING FOR TOOLS; DUSTING, WET MOPPING, SCRUBBING, WAXING, AND REFINISHING SERVICES; CLEANING TOILETS, WINDOWS, WALLS; APPLYING VARIOUS CLEANING AGENTS, PROTECTIVE COATINGS, AND DISINFECTANTS; SCHEDULING WORK; AND PURCHASING CUSTODIAL SUPPLIES.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 9 MONTHS LONG.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BUILDING CARE/MAINTENANCE/ SERVICE' PROGRAM PREPARES INDIVIDUALS FOR OCCUPATIONS IN INSTITUTIONS, HOTEL/MOTEL HOUSEKEEPING, COMMERCIAL CLEANING SERVICES, AND MANAGEMENT ASSISTANCE IN VARIOUS COMMERCIAL AND INSTITUTIONAL BUILDINGS. INSTRUCTION INCLUDES CLEANING AND CARE OF FLOORS, FLOOR COVERINGS, WALLS, WOODWORK, WINDOWS, WINDOW TREATMENTS, FURNISHINGS, AND EQUIPMENT; USING CLEANING AND SANITIZING COMPOUNDS, FLUIDS AND CHEMICALS CORRECTLY TO PROTECT HEALTH AND SAFETY OF INDIVIDUALS; USING AND CARING FOR TOOLS; DUSTING, WET MOPPING, SCRUBBING, WAXING, AND REFINISHING SERVICES; CLEANING TOILETS, WINDOWS, WALLS; APPLYING VARIOUS CLEANING AGENTS, PROTECTIVE COATINGS, AND DISINFECTANTS; SCHEDULING WORK; AND PURCHASING CUSTODIAL SUPPLIES.

THE 'HOUSEKEEPING AIDE' PROGRAM PREPARES INDIVIDUALS FOR OCCUPATIONS IN COMMERCIAL CLEANING OPERATIONS. INSTRUCTION INCLUDES CLEANING AND CARE OF BUILDING SURFACES AND CLEANING EQUIPMENT; USING CLEANING AND SANITIZING COMPOUNDS, FLUIDS AND CHEMICALS CORRECTLY TO PROTECT HEALTH AND SAFETY OF INDIVIDUALS; USING AND CARING FOR TOOLS; DUSTING, WET MOPPING, SCRUBBING, WAXING, AND REFINISHING SERVICES; CLEANING TOILETS, WINDOWS, WALLS; AND APPLYING VARIOUS CLEANING AGENTS, PROTECTIVE COATINGS, AND DISINFECTANTS.

--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED IN EACH PROGRAM.

--- LENGTH OF PROGRAM: THE BUILDING CARE PROGRAM IS A 6-MONTH COURSE. THE HOUSEKEEPING AIDE PROGRAM IS A NINE MONTH COURSE.

--- SPECIAL COSTS: PROGRAM RELATED COSTS ARE \$30 FOR BUILDING CARE.

- - - - - 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'EXECUTIVE HOUSEKEEPING' PROGRAM TRAINS STUDENTS TO OVERSEE THE MAINTENANCE OF PUBLIC FACILITIES. STUDENTS IN THIS PROGRAM TAKE COURSES IN AREAS SUCH AS ENGINEERING, ACCOUNTING, AND MANAGEMENT, IN ADDITION TO GENERAL EDUCATION COURSES.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED IN EACH PROGRAM.

--- LENGTH OF PROGRAM: THESE ARE 2-YEAR PROGRAMS.

227 PERSONAL SERVICES

Programs in personal services are designed to prepare individuals for a variety of jobs such as electrologists, masseurs, or masseuses.

Programs in electrolysis prepare students to remove unwanted hair by means of an electric current applied to the body with a needle-shaped electrode. Programs at private electrolysis schools vary in length from 120 to 1100 hours. State certification requirements vary. Some states require almost no training while others require at least 1100 hours of classroom and clinical training and successful completion of a state examination to become a certified electrologist.

Programs in massage are designed to prepare people for careers as masseurs and masseuses. Masseurs and masseuses work in nursing homes and health spas or in physical therapy-related settings under the supervision of a physical therapist or chiropractor. Individuals learn how to improve clients' circulation and to soothe or stimulate the nervous system. Private massage school programs vary in length depending on state requirements. Some states require licensing, with as many as 500 hours of training required.

---PROGRAM ADMISSION: Many schools require the student to be a high school graduate and 18 years old. Many schools also require an interview.

---TYPICAL COURSE WORK: Course work includes a combination of lectures and practical experience. Classes in electrolysis programs cover such areas as:

Histology	Use of Electricity in
Bacteriology	Electrolysis
Sterilization and Hygiene	Basic Dermatology
Physiology	

Students might also study business practices, ethics, and personal relations, depending upon the length of the program.

Course work in massage includes lectures and practical experience. Heavy emphasis is placed on anatomy and physiology of the human body and the study of circulatory, respiratory, and other body systems. Other courses include

Hygiene and First Aid	Massage Theory
Medical Ethics	Massage Practice
Hydrotherapy	Exercise

---GRADUATION REQUIREMENTS: Requirements vary with school and length of program. See school catalogs for more information.

---THINGS TO KNOW: Many schools offer both day and evening classes in electrolysis and/or massage.

---RELATED PROGRAMS: PROG 367 Rehabilitation Services, 373 Chiropractic, 353 Nursing, 228 Hair Design, 385 Radiological Technology, 383 Medical Laboratory Technologies.

---ASSOCIATED OCCUPATIONS: DESC 8186 Cosmetologists, 8192 Radiologic Technologists, 8164 Licensed Practical Nurses, 8177 Physical Therapists, 8169 Respiratory Therapists, 8122 Chiropractors, 8443 Recreational Therapists.

CIPS: 12.0401
12.0404

12.0405

12.0499

SCHOOLS:

- - - - - 82064 MODEL COLLEGE OF HAIR DESIGN

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY MASTER COURSE' COVERS 1550 HOURS OF INSTRUCTION. THIS COURSE SHALL CONSIST OF THE FULL MANICURIST COURSE AND THE FULL ESTHETICIAN COURSE CONTENT. DURING THEIR INSTRUCTION, A STUDENT ALSO ACQUIRES COMPLETE KNOWLEDGE OF MEN'S AND WOMEN'S HAIRSTYLING, HAIRCUTTING, HAIRCOLORING, BACTERIOLOGY, ELECTRICITY, LIGHT THERAPY AND PRODUCT KNOWLEDGE. CLASSES ON PERSONAL GROOMING, PERSONALITY DEVELOPMENT, POISE AND SELF-ESTEEM ARE GIVEN. THE CURRICULUM INCLUDES BUSINESS MANAGEMENT SESSIONS, RECEPTIONISTS TRAINING, SALES TECHNIQUES AND MOTIVATION, AND CUSTOMER RELATIONS. THIS ALSO INCLUDES THE TEACHING OF THE MINNESOTA STATE LAWS PERTAINING TO COSMETOLOGY. STUDENTS WILL ALSO LEARN THE REDKEN SCIENTIFIC APPROACH TO ALL OF THE ABOVE.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THE COMPLETE MASTER COURSE IS 1550 HOURS LONG, WHILE THE MANICURING COURSE IS 350 HOURS.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION EXCEPT FOR UNIFORMS AND SHOES.

- - - - - 82075 ST. CLOUD BEAUTY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTROLYSIS' COURSE PREPARES THE STUDENTS FOR EMPLOYMENT IN THE FIELD OF PERMANENT HAIR REMOVAL, WITH SPECIAL EMPHASIS ON THE USE OF ELECTROLYSIS EPILATORS AND EQUIPMENT. STUDENTS LEARN THE CHARACTERISTICS OF SKIN AND HAIR BY STUDYING THEIR DEVELOPMENT AND FUNCTION; THEY LEARN HOW TO RECOGNIZE SKIN DISORDERS WHICH RELATE TO THE ELECTROLYSIS PRACTICE. BOTH HEAT AND CHEMICAL APPLICATIONS OF PERMANENT HAIR REMOVAL ARE STUDIED.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 120 HOURS LONG.

--- SPECIAL COSTS: ALL COSTS ARE INCLUDED IN THE TUITION EXCEPT UNIFORMS.

Hair design programs are designed to teach people the skills necessary to care for and style hair and provide other related personal services such as facials, manicures, artificial nails, and barbering. Most hair design programs are offered at private schools of barbering or cosmetology; however, some public vocational technical schools and community colleges also offer programs. Programs range in length from 1000 hours to 2500 hours. Students usually attend school full days, five days a week. Most programs require nine to twelve months to complete. Length is determined by state licensing requirements. All states require licensing for barbers and cosmetologists (see PREP 8186 Cosmetologists).

---PROGRAM ADMISSION: Education requirements for admission vary from state to state. Some states have no minimum requirements while others require a high school diploma. Students must be 16 years of age in some states, and 18 years old in others.

---TYPICAL COURSE WORK: Barbering and cosmetology programs use classroom lectures, demonstrations, and many hours of practice on mannequins and on fellow students. Most barbering and cosmetology program courses include:

Hygiene and Grooming	Hair Styling
Hair and Scalp Treatments	Facial Treatments

Cosmetology programs may also provide courses in manicuring and electrolysis. Additional courses in barbering programs include shaving and may include courses in selling and general business practices.

---GRADUATION REQUIREMENTS: Students must complete the number of classroom and laboratory hours necessary to satisfy state licensing requirements. They must also pass written and skill-related exams.

---THINGS TO KNOW: Students are required to have their own tools and supplies. The cost for these items may be in addition to tuition. In some states, competency-based programs are available. These programs often enable students to complete a program in less than the specified hours of fixed-length programs.

---RELATED PROGRAM: PROG 227 Personal Services.

---DIRECTLY RELATED OCCUPATION: DESC 8186 Costmetologists.

---REFERENCES:

Board of Barber Examiners
Minnesota Department of Commerce
5th Floor Metro Square Building
7th and Robert Streets
St. Paul, MN 55101

State Board of Cosmetology
Office of Consumer Services/Cosmetology Unit
Minnesota Department of Commerce
1st Floor Metro Square Building
7th and Robert Streets
St. Paul, MN 55101

CIPS: 12.0402
12.0403

SCHOOLS:

- - - - - 25004 AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM PREPARES INDIVIDUALS TO CARE FOR AND BEAUTIFY HAIR, COMPLEXION AND HANDS, BY GIVING SHAMPOOS, RINSES AND SCALP TREATMENTS. INSTRUCTION INCLUDES STYLING, CUTTING, DYEING, TINTING, PERMANENT WAVING AND BLEACHING HAIR, GIVING FACIALS, MANICURES, HAND AND ARM MASSAGE, WITH EMPHASIS ON HYGIENE, SANITATION, CUSTOMER RELATIONS, AND SALON MANAGEMENT. INSTRUCTION QUALIFIES STUDENTS TO TAKE THE LICENSING EXAMINATIONS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE COSMETOLOGY PROGRAM IS 1550 HOURS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$115 FOR TOOLS, \$35 FOR BOOKS AND SUPPLIES, \$65 FOR UNIFORMS, AND A \$175 MISCELLANEOUS CHARGE.

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM PREPARES INDIVIDUALS TO CARE FOR AND BEAUTIFY HAIR, COMPLEXION AND HANDS, BY GIVING SHAMPOOS, RINSES AND SCALP TREATMENTS. INSTRUCTION INCLUDES STYLING, CUTTING, DYEING, TINTING, PERMANENT WAVING AND BLEACHING HAIR, GIVING FACIALS, MANICURES, HAND AND ARM MASSAGE, WITH EMPHASIS ON HYGIENE, SANITATION, CUSTOMER RELATIONS, AND SALON MANAGEMENT. INSTRUCTION QUALIFIES STUDENTS TO TAKE THE LICENSING EXAMINATIONS.

THE 'BARBERING' PROGRAM PREPARES INDIVIDUALS TO CUT, SHAMPOO, AND STYLE HAIR; AND SHAVE FACES; AND IN THE USE OF EQUIPMENT AND STERILIZATION PROCEDURES; AND SPECIAL ATTENTION IS GIVEN TO HYGIENE AND SCALP DISEASE. INSTRUCTION IN RINSE AND SCALP TREATMENTS; DYEING AND TINTING, PERMANENT WAVING, AND MANICURES, CUSTOMER RELATIONS AND SALON MANAGEMENT IS INCLUDED. INSTRUCTION QUALIFIES STUDENTS FOR THE LICENSING EXAMINATION.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: STUDENTS COMPLETE THE 1500 HOURS OF TRAINING WITHIN 46-58 WEEKS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$40 FOR BOOKS, \$130 FOR TOOLS, AND \$65 FOR UNIFORMS AND/OR SUPPLIES FOR COSMETOLOGY AND \$25 FOR BOOKS, \$180 FOR TOOLS AND \$15 FOR UNIFORMS AND/OR OTHER SUPPLIES FOR BARBERING PROGRAM.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM PREPARES INDIVIDUALS TO CARE FOR AND BEAUTIFY HAIR, COMPLEXION AND HANDS, BY GIVING SHAMPOOS, RINSES AND SCALP TREATMENTS. INSTRUCTION INCLUDES STYLING, CUTTING, DYEING, TINTING, PERMANENT WAVING AND BLEACHING HAIR, GIVING FACIALS, MANICURES, HAND AND ARM MASSAGE, WITH EMPHASIS ON HYGIENE, SANITATION, CUSTOMER RELATIONS, AND SALON MANAGEMENT. INSTRUCTION QUALIFIES STUDENT TO TAKE THE LICENSING EXAMINATIONS.

--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: COSMETOLOGY IS A 13 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$259 FOR BOOKS, SUPPLIES AND EQUIPMENT.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM PREPARES INDIVIDUALS TO CARE FOR AND BEAUTIFY HAIR, COMPLEXION AND HANDS, BY GIVING SHAMPOOS, RINSES AND SCALP TREATMENTS. INSTRUCTION INCLUDES STYLING, CUTTING, DYEING, TINTING, PERMANENT WAVING AND BLEACHING HAIR, GIVING FACIALS, MANICURES, HAND AND ARM MASSAGE, WITH EMPHASIS ON HYGIENE, SANITATION, CUSTOMER RELATIONS, AND SALON MANAGEMENT. INSTRUCTION QUALIFIES STUDENTS TO TAKE THE LICENSING EXAMINATIONS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THE COSMETOLOGY PROGRAM IS 11 MONTHS LONG AND STARTS QUARTERLY IN SEPT., DEC., AND MARCH.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE APPROXIMATELY \$280 FOR BOOKS AND SUPPLIES.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM IS A SPECIAL INTERNATIONAL STUDY PROGRAM FOR STUDENTS FROM MINNESOTA AND SURROUNDING STATES. STUDENTS STUDY IN LONDON.

--- LENGTH OF PROGRAM: THIS IS A THREE WEEK PROGRAM.

--- SPECIAL COSTS: THE TOTAL COSTS FOR THE PROGRAM ARE \$2500 WHICH INCLUDES TUITION, SUPPLIES, ROUND TRIP TRAVEL EXPENSES, MEALS AND LODGING.

- - - - - 25028 THIEF RIVER FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM PREPARES INDIVIDUALS TO CARE FOR AND BEAUTIFY HAIR, COMPLEXION AND HANDS, BY GIVING SHAMPOOS, RINSES AND SCALP TREATMENTS. INSTRUCTION INCLUDES STYLING, CUTTING, DYEING, TINTING, PERMANENT WAVING AND BLEACHING HAIR, GIVING FACIALS, MANICURES, HAND AND ARM MASSAGE, WITH EMPHASIS ON HYGIENE, SANITATION, CUSTOMER RELATIONS, AND SALON MANAGEMENT. INSTRUCTION QUALIFIES STUDENTS TO TAKE THE LICENSING EXAMINATIONS.

--- DEGREES OFFERED: DEGREES OF OCCUPATIONAL PROFICIENCY ARE AWARDED.

--- LENGTH OF PROGRAM: THE PROGRAM LASTS 14 MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE APPROXIMATELY \$220 FOR BOOKS AND SUPPLIES AND \$30 FOR UNIFORMS.

- - - - - 25029 WADENA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM PREPARES INDIVIDUALS TO CARE FOR AND BEAUTIFY HAIR, COMPLEXION AND HANDS, BY GIVING SHAMPOOS, RINSES AND SCALP TREATMENTS. INSTRUCTION INCLUDES STYLING, CUTTING, DYEING, TINTING, PERMANENT WAVING AND BLEACHING HAIR, GIVING FACIALS, MANICURES, HAND AND ARM MASSAGE, WITH EMPHASIS ON HYGIENE, SANITATION, CUSTOMER RELATIONS, AND SALON MANAGEMENT. INSTRUCTION QUALIFIES STUDENTS TO TAKE THE LICENSING EXAMINATIONS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES 1500 HOURS (APPROX. 11-1/2 MONTHS).

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$190 FOR BOOKS AND SUPPLIES AND APPROXIMATELY \$65 FOR UNIFORMS.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM PREPARES INDIVIDUALS TO CARE FOR AND BEAUTIFY HAIR, COMPLEXION AND HANDS, BY GIVING SHAMPOOS, RINSES AND SCALP TREATMENTS. INSTRUCTION INCLUDES STYLING, CUTTING, DYEING, TINTING, PERMANENT WAVING AND BLEACHING HAIR, GIVING

FACIALS, MANICURES, HAND AND ARM MASSAGE, WITH EMPHASIS ON HYGIENE, SANITATION, CUSTOMER RELATIONS, AND SALON MANAGEMENT. INSTRUCTION QUALIFIES STUDENTS TO TAKE THE LICENSING EXAMINATIONS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OR A CERTIFICATE IS AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 11 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$40 FOR BOOKS (ALL USABLE BOOKS ARE BOUGHT BACK AT 70 PERCENT OF PAID PRICE), \$150 FOR A KIT AND SUPPLIES, AND \$75 FOR UNIFORMS.

- - - - - 25031 WINONA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM PREPARES INDIVIDUALS TO CARE FOR AND BEAUTIFY HAIR, COMPLEXION AND HANDS, BY GIVING SHAMPOOS, RINSES AND SCALP TREATMENTS. INSTRUCTION INCLUDES STYLING, CUTTING, DYEING, TINTING, PERMANENT WAVING AND BLEACHING HAIR, GIVING FACIALS, MANICURES, HAND AND ARM MASSAGE, WITH EMPHASIS ON HYGIENE, SANITATION, CUSTOMER RELATIONS, AND SALON MANAGEMENT. INSTRUCTION QUALIFIES STUDENTS TO TAKE THE LICENSING EXAMINATIONS.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: COSMETOLOGY IS AN 11-MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$270 FOR BOOKS AND SUPPLIES AND \$50 FOR UNIFORMS.

- - - - - 82048 COSMETOLOGY TRAINING CENTERS LTD. (ST. PAUL)

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM TRAINS STUDENTS FOR CAREERS AS COSMETOLOGISTS AND PREPARES THEM TO SUCCESSFULLY COMPLETE THE STATE BOARD LICENSE EXAMINATION. COURSE WORK INCLUDES HAIR CUTTING, HAIR COLORING, HAIR STYLING, STATE LAWS AND REGULATIONS, MANICURING AND SKIN CARE.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED UPON SUCCESSFUL COMPLETION OF 1550 HOURS OF TRAINING.

--- LENGTH OF PROGRAM: PROGRAM LENGTH IS APPROXIMATELY 10 MONTHS (1550 HOURS ARE REQUIRED BY LAW).

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION FIGURE (\$3,350) EXCEPT SHOES AND UNIFORMS.

- - - - - 82049 ARROWHEAD BEAUTY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM IS DESIGNED TO TRAIN STUDENTS FOR CAREERS AS COSMETOLOGISTS AND PREPARE THEM TO SUCCESSFULLY COMPLETE THE STATE BOARD OF COSMETOLOGY EXAMINATION. COURSES OF INSTRUCTION INCLUDE: HAIR COLORING, ANATOMY, DERMATOLOGY, HAIR DRESSING, HAIR CUTTING, BUSINESS MANAGEMENT, AND STATE LAWS.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS GRANTED AT THE END OF THE PROGRAM.

--- LENGTH OF PROGRAM: THE PROGRAM IS 1550 HOURS LONG, OR APPROXIMATELY 8-1/2 MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE UNIFORMS AND SHOES, \$390 FOR STUDENT STARTER KIT INCLUDING BOOKS, AND A \$100 REGISTRATION FEE. MISCELLANEOUS TOOLS DURING THE COURSE MAY COST \$25-\$75. TUITION IS \$2100.

- - - - - 82051 BROOKS BEAUTY SCHOOL

--- OBJECTIVES OF THE PROGRAM: THE PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR CAREERS IN COSMETOLOGY. COURSES INCLUDE: ANATOMY AND HYGIENE, SHOP MANAGEMENT, HAIR STYLING, FACIALS, PERMANENT WAVING, MAKEUP AND MANICURING. STUDENTS ARE THEN PREPARED TO TAKE THE STATE EXAM TO BE LICENSED.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.
--- LENGTH OF PROGRAM: THE LENGTH OF THIS PROGRAM IS 1550 HOURS OR ABOUT 9 - 10 MONTHS.
--- SPECIAL COSTS: THERE IS A \$25 REGISTRATION FEE PLUS STATE LICENSING FEE FOR COSMETOLOGY.

- - - - - 82052 BROOKS SCHOOL OF BARBERING

--- OBJECTIVES OF THE PROGRAM: THE 'BARBERING AND HAIRSTYLING' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR CAREERS IN BARBERING AND HAIRSTYLING. AREAS OF STUDY INCLUDE ANATOMY AND HYGIENE, SHOP MANAGEMENT AND RECORD KEEPING, COMPLETE CARE AND STYLING OF HAIR, TOUPEES, WIGS, BEARDS, MUSTACHES, PERMANENTS, AND HAIR COLORING. UPON COMPLETION OF THIS PROGRAM, STUDENTS ARE PREPARED TO TAKE THE EXAM FOR THE BOARD OF BARBER EXAMINERS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE LENGTH OF THIS PROGRAM IS 1500 HOURS OR ABOUT 9 MONTHS.

--- SPECIAL COSTS: THERE IS A \$25 REGISTRATION FEE. BARBERING COSTS INCLUDE \$20 FOR BOOKS, \$290 FOR TOOLS, UNIFORM, AND SUPPLIES AND A \$25 REGISTRATION FEE, AND THE STATE LICENSING FEE.

- - - - - 82054 MICHAEL'S SCHOOL OF COSMETOLOGY

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM PREPARES STUDENTS TO PASS THE STATE BOARD OF COSMETOLOGY EXAMINATION, AND TRAINS THEM FOR PROFESSIONAL CAREERS AS COSMETOLOGISTS. COURSE WORK INCLUDES HAIR AND SCALP TREATMENT, MANICURING AND NAIL STRUCTURING, HAIR COLORING, HAIR FROSTING, IRON CURLING, SKIN CARE AND MAKE-UP, BUSINESS ADMINISTRATION, STATE LAWS AND REGULATIONS, SALES - MARKETING, AND COSMETOLOGY CHEMISTRY IN ADDITION TO HAIRCUTTING. THE REDKEN SCIENTIFIC EDUCATION SYSTEM PROGRAM IS ALSO OFFERED. PIVOT POINT HAIR CUTTING, ESTHETICIAN, MANICURING AND ELECTROLYSIS PROGRAMS ARE OFFERED.

--- DEGREES OFFERED: TWO DIPLOMAS ARE AWARDED UPON COURSE COMPLETION. ONE IS MICHAEL'S DIPLOMA AND THE OTHER IS A REDKEN DIPLOMA.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 1550 HOURS (APPROXIMATELY 10 MONTHS) LONG.

--- SPECIAL COSTS: BOOKS AND EQUIPMENT COSTS ARE LISTED SEPARATELY FROM TUITION.

- - - - - 82055 DULUTH ACADEMY OF HAIR DESIGN

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM IS DESIGNED TO TRAIN STUDENTS FOR CAREERS IN THE COSMETOLOGY FIELD, AND PREPARE THEM TO SUCCESSFULLY COMPLETE THE STATE BOARD OF COSMETOLOGY EXAMINATION. COURSES OF INSTRUCTION INCLUDE: DERMATOLOGY, ANATOMY, HAIR CUTTING, HAIR COLORING, BLOW WAVING, IRON CURLING, HAIR STYLING, BUSINESS MANAGEMENT, MANICURING, AND STATE LAWS.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS GRANTED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 1550 HOURS LONG, OR APPROXIMATELY 8 MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$390 FOR A STUDENT STARTER KIT, BOOKS AND MANIKIN, AND A \$100 REGISTRATION FEE. MISCELLANEOUS TOOLS DURING THE COURSE MAY COST \$25-\$75. TUITION IS \$2100.

- - - - - 82056 FLORIAN SCHOOL OF COSMETOLOGY

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM TRAINS STUDENTS IN THE FIELD OF COSMETOLOGY AND PREPARES THEM TO SUCCESSFULLY COMPLETE THE MULTI-STATE LICENSING EXAM AND PRACTICAL AND CHEMICAL CERTIFICATION.

COURSE WORK INCLUDES HAIR AND SCALP TREATMENTS, MANICURING, PEDICURING AND ACRYLIC NAILS, HAIR COLORING, BASIC AND PIVOT POINT HAIR STYLING, WIGGERS, HAIR CUTTING, PERMANENT WAVING, MAKEUP AND SKIN CARE, BUSINESS ADMINISTRATION, STATE LAWS AND REGULATIONS, AND SALES MARKETING.

--- DEGREES OFFERED: GRADUATING STUDENTS ARE AWARDED DIPLOMAS. THEY MUST PASS THE MULTI-STATE LICENSING EXAM PLUS PRACTICAL AND CHEMICAL CERTIFICATION IN ORDER TO PRACTICE. ALL STUDENTS RECEIVE A SPECIAL CERTIFICATE FOR COMPLETING THE PIVOT POINT PROGRAM. A DIPLOMA IS OFFERED IN THE REDKEN SCIENTIFIC EDUCATION PROGRAM.

--- LENGTH OF PROGRAM: THE PROGRAM IS 10 MONTHS LONG, INCLUDING HOLIDAYS AND ANNUAL BREAK (1550 HOURS).

--- SPECIAL COSTS: UNIFORMS ARE NOT INCLUDED IN THE \$3,295 SCHOOL COSTS. BOOKS AND KIT ARE INCLUDED.

- - - - - 82057 GLAMOUR BEAUTY ACADEMY

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM IS DESIGNED TO TRAIN STUDENTS FOR CAREERS IN THE FIELD OF COSMETOLOGY, AND PREPARE THEM TO SUCCESSFULLY COMPLETE THE STATE BOARD EXAMINATION. COURSES INCLUDE HAIR TINTING, MANICURING, HAIR STYLING, FACIAL MASSAGE AND MAKE-UP, SCALP TREATMENTS, STATE AND LOCAL LAWS, SHOP MANAGEMENT, WIG STYLING, AND SALES SKILL.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED UPON GRADUATION AND THE STUDENT IS THEN ELIGIBLE TO TAKE THE STATE BOARD EXAMINATION FOR COSMETOLOGY.

--- LENGTH OF PROGRAM: APPROXIMATELY 12 MONTHS FULL TIME, 18 MONTHS PART TIME, 24 MONTHS NIGHT STUDENTS OR 1550 HOURS ARE NEEDED FOR GRADUATION.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE UNIFORMS, SHOES, AND EXTRA SUPPLIES. TUITION IS \$3000.

- - - - - 82058 HIBBING BEAUTY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM IS DESIGNED TO TRAIN STUDENTS FOR CAREERS IN COSMETOLOGY, AND PREPARE THEM TO SUCCESSFULLY COMPLETE THE STATE BOARD OF COSMETOLOGY EXAM. COURSE WORK INCLUDES HAIR COLORING, FACIAL TREATMENT, HAIR CUTTING AND STYLING, DERMATOLOGY, MANICURING, PERMANENT WAVING, BUSINESS MANAGEMENT, PUBLIC RELATIONS, AND STATE LAWS.

--- DEGREES OFFERED: A DIPLOMA AND REDKEN CERTIFICATE IS AWARDED.

--- LENGTH OF PROGRAM: PROGRAM LENGTH IS 1550 HOURS, OR APPROXIMATELY 9 MONTHS OF FULL-TIME STUDY.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$390 FOR A STUDENT KIT, A \$100 REGISTRATION FEE AND UNIFORMS AND SHOES.

- - - - - 82059 MINNESOTA BEAUTY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM PREPARES STUDENTS FOR CAREERS AS COSMETOLOGISTS, AND PROVIDES THEM WITH THE KNOWLEDGE REQUIRED TO SUCCESSFULLY COMPLETE THE STATE BOARD OF COSMETOLOGY EXAMINATION. COURSE WORK INCLUDES HAIR STYLING, COLORING, SHAPING, AND CUTTING. A MANICURING PROGRAM IS ALSO OFFERED AND CAN BE TAKEN SEPARATELY.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED UPON THE SUCCESSFUL COMPLETION OF THE PROGRAM.

--- LENGTH OF PROGRAM: THE PROGRAM IS APPROXIMATELY 10 MONTHS LONG. A PART-TIME 20 MONTH PROGRAM IS ALSO OFFERED.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL NOT INCLUDE A UNIFORM AND SHOES. STUDENT KIT IS INCLUDED IN TUITION (\$2250). A REGISTRATION FEE OF \$30 IS REQUIRED.

- - - - - 82060 COSMETOLOGY TRAINING CENTER (MANKATO)

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM IS DESIGNED TO PREPARE STUDENTS TO TAKE THE STATE BOARD EXAM FOR LICENSING AS COSMETOLOGISTS. STUDENTS PRACTICE ALL BEAUTY SERVICES INCLUDING HAIR STYLING, PERMANENT WAVING, MANICURING, COLORING, FACIALS, MAKE-UP, HAIR CUTTING AND WIG WORK. THEY ALSO STUDY TECHNICAL SUBJECTS SUCH AS CHEMISTRY, ANATOMY, AND STATE LAWS. BUSINESS PRACTICE AND SALON MANAGEMENT ARE ALSO INCLUDED IN THE PROGRAM.

--- DEGREES OFFERED: A DIPLOMA-CERTIFICATE OF GRADUATION IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 1550 HOURS, OR 10 MONTHS OF FULL-TIME STUDY.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS AND UNIFORMS. TUITION IS \$1,700.

- - - - - 82061 MAXIMS BEAUTY ACADEMY

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM IS DESIGNED TO TRAIN STUDENTS FOR CAREERS IN THE FIELD OF COSMETOLOGY, MANICURING AND ESTHETICIAN TO PREPARE THEM TO SUCCESSFULLY COMPLETE CERTIFICATION FOR LICENSING. COURSE WORK INCLUDES MINNESOTA STATE LAW, CUSTOMER RELATIONS, PERSONALITY DEVELOPMENT, BEAUTY SALON MANAGEMENT, HAIR STYLING, HAIR COLORING, PERMANENT WAVING, HAIR SHAPING, REVERSE CURLS, HAIR SILKING AND PRESSING, SKIN CARE AND MAKEUP, AND MANICURING.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED UPON COMPLETION OF COURSE WORK.

--- LENGTH OF PROGRAM: THE COSMETOLOGY PROGRAM IS 1550 HOURS OR APPROXIMATELY 10 MONTHS LONG. MANICURING IS 350 HOURS AND ESTHETICIAN IS 600 HOURS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$85 FOR UNIFORMS. TUITION IS \$2,750 WHICH INCLUDES COSTS FOR THE STUDENT KITS.

- - - - - 82062 HASTINGS COLLEGE OF HAIR DESIGN

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM IS A COURSE REQUIRING 1550 HOURS OF TRAINING OVER A 10 MONTH PERIOD, LEADING TO LICENSURE AND QUALIFICATION FOR ENTRY LEVEL POSITIONS AS STYLISTS, MANICURISTS, OR ESTHETICIANS IN LICENSED SALONS. COURSE WORK INCLUDES PUBLIC RELATIONS AND PSYCHOLOGY, CHEMISTRY, ANATOMY, HAIR SHAPING, HAIR STYLING, STATE LAWS, REGULATIONS, MANICURING, HAIR COLORING, MAKEUP, AND SKIN ANALYSIS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED TO THE STUDENT UPON SUCCESSFUL COMPLETION OF THE PROGRAM.

--- LENGTH OF PROGRAM: THE COSMETOLOGY PROGRAM MAY BE COMPLETED IN 10 MONTHS, MANICURING IS A 350 HOUR PROGRAM AND ESTHETICIAN IS A 600 HOUR PROGRAM.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 82063 COSMETOLOGY TRAINING CENTERS LTD. (MPLS.)

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM IS DESIGNED TO TRAIN STUDENTS FOR CAREERS AS COSMETOLOGISTS AND PREPARE THEM TO SUCCESSFULLY COMPLETE THE STATE BOARD OF COSMETOLOGY EXAMINATION. COURSE WORK INCLUDES HAIR STYLING, HAIRCUTTING AND SHAPING, HAIR COLORING, MANICURING, WIGGERS, IRON CURLING, COSMETOLOGY RULES AND REGULATIONS, AND AIR WAVING.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED UPON COMPLETION OF 1500 HOURS OF TRAINING. A MANICURING PROGRAM IS ALSO OFFERED WHICH REQUIRES 250 HOURS OF TRAINING.

--- LENGTH OF PROGRAM: APPROXIMATELY 10 MONTHS OR 1550 HOURS OF CLASSES

ARE REQUIRED.

--- SPECIAL COSTS: PROGRAM RELATED COSTS ARE ALL INCLUDED IN THE TUITION FIGURE (\$3000) EXCEPT FOR UNIFORMS AND SHOES.

- - - - - 82064 MODEL COLLEGE OF HAIR DESIGN

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY MASTER COURSE' COVERS 1550 HOURS OF INSTRUCTION. THIS COURSE SHALL CONSIST OF THE FULL MANICURIST COURSE AND THE FULL ESTHETICIAN COURSE CONTENT. DURING THEIR INSTRUCTION, A STUDENT ALSO ACQUIRES COMPLETE KNOWLEDGE OF MEN'S AND WOMEN'S HAIRSTYLING, HAIRCUTTING, HAIR COLORING, BACTERIOLOGY, ELECTRICITY, LIGHT THERAPY AND PRODUCT KNOWLEDGE. CLASSES ON PERSONAL GROOMING, PERSONALITY DEVELOPMENT, POISE AND SELF-ESTEEM ARE GIVEN. THE CURRICULUM INCLUDES BUSINESS MANAGEMENT SESSIONS, RECEPTIONISTS TRAINING, SALES TECHNIQUES AND MOTIVATION, AND CUSTOMER RELATIONS. THIS ALSO INCLUDES THE TEACHING OF THE MINNESOTA STATE LAWS PERTAINING TO COSMETOLOGY. STUDENTS WILL ALSO LEARN THE REDKEN SCIENTIFIC APPROACH TO ALL OF THE ABOVE.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE COMPLETE MASTER COURSE IS 1550 HOURS LONG, WHILE THE MANICURING COURSE IS 350 HOURS.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION (\$2950) EXCEPT FOR UNIFORMS AND SHOES.

- - - - - 82065 MOLER BARBER SCHOOL OF HAIR STYLING

--- OBJECTIVES OF THE PROGRAM: THE 'BARBER TRAINING' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR CAREERS AS PROFESSIONAL BARBERS. THE PROGRAM IS DIVIDED INTO 2 PARTS: SHOP AND RELATED THEORY, WHICH INCLUDES TRAINING IN PERMING AND STYLING. UPON GRADUATION, STUDENTS ARE PREPARED TO TAKE THE EXAM FOR THE STATE BOARD OF BARBER EXAMINERS IN ORDER TO BECOME AN APPRENTICE.

--- DEGREES OFFERED: UPON COMPLETION OF THIS PROGRAM A CERTIFICATE IS AWARDED.

--- LENGTH OF PROGRAM: THE LENGTH OF THIS PROGRAM IS 9 MONTHS (1500 HOURS).

--- SPECIAL COSTS: PROGRAM RELATED COSTS ARE TUITION AND FEES (\$2777), TOOLS, EQUIPMENT, TAX (\$318) FOR A TOTAL COST OF \$3095.

- - - - - 82066 OLIVER THEIN BEAUTY SCHOOL

--- OBJECTIVES OF THE PROGRAM: THE PURPOSE OF THE 'COSMETOLOGY' PROGRAM IS TO TRAIN STUDENTS FOR CAREERS IN VARIOUS PHASES OF THE COSMETOLOGY FIELD. STUDENTS STUDY ETHICS, WHICH INCLUDES SANITATION AND PUBLIC RELATIONS, AS WELL AS THE SCIENCE OF COSMETOLOGY, WHICH INCLUDES CHEMISTRY, ANATOMY, AND DERMATOLOGY. THE PRACTICAL PHASE OF THE PROGRAM INCLUDES SHAMPOOS, SHAPING AND STYLING, WIG CARE, MANICURING, PERMANENT WAVING, COLORING, MANICURING, MAKEUP, AND FACIAL TREATMENTS.

--- DEGREES OFFERED: STUDENTS RECEIVE DIPLOMAS UPON GRADUATION AND ARE ELIGIBLE TO TAKE THE REQUIRED STATE BOARD EXAMS. A SERPARATE MANICURING PROGRAM IS ALSO OFFERED.

--- LENGTH OF PROGRAM: THE COSMETOLOGY PROGRAM REQUIRES 1550 HOURS OR ABOUT 10 MONTHS OF STUDY. THE MANICURING PROGRAM REQUIRES 250 HOURS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$400 FOR A STUDENT KIT AND BOOKS, \$25 REGISTRATION FEE PLUS SHOES AND UNIFORMS. TUITION IS \$2000. PROGRAM RELATED COSTS FOR THE MANICURING PROGRAM INCLUDE \$125 FOR EQUIPMENT, POLISH AND BOOKS PLUS A \$25 REGISTRATION FEE. TUITION IS \$425.

- - - - - 82068 COSMETOLOGY TRAINING CENTER (FARIBAULT)

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM IS DESIGNED TO

PREPARE STUDENTS TO TAKE THE STATE EXAM FOR LICENSING AS COSMETOLOGISTS. STUDENTS PRACTICE ALL BEAUTY SERVICES INCLUDING HAIR STYLING, PERMANENT WAVING, MANICURING, HAIR COLORING, FACIALS, MAKE-UP, HAIR CUTTING, AND WIG WORK. THEY ALSO STUDY TECHNICAL SUBJECTS SUCH AS CHEMISTRY, ANATOMY, AND STATE LAWS. BUSINESS PRACTICE AND SALON MANAGEMENT ARE ALSO INCLUDED IN THE PROGRAM. STUDENTS MAY ALSO CHOOSE AN ESTHETICIAN COURSE OR A MANICURIST COURSE.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE COSMETOLOGY PROGRAM IS 1550 HOURS OR 10 MONTHS OF FULL-TIME STUDY. THE ESTHETICIAN PROGRAM IS 600 HOURS, THE MANICURIST PROGRAM IS 350 HOURS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE A REGISTRATION FEE OF \$50 AND \$200 FOR A STUDENT KIT AND BOOKS. UNIFORMS ARE NOT INCLUDED. TUITION IS \$3350.

- - - - - 82069 RITTER-FERGUS FALLS SCHOOL OF BEAUTY

OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM INTENDS TO PREPARE STUDENTS TO PASS THE STATE LICENSING EXAM TO BECOME PROFESSIONAL BEAUTICIANS. STUDENTS STUDY HAIR CUTTING, PERMANENT WAVING, TINTING, STYLING, AND WIG WORK. THEY RECEIVE BOTH THEORETICAL AND PRACTICAL TRAINING.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM REQUIRES 9 MONTHS OF FULL-TIME STUDY (1550 HOURS).

--- SPECIAL COSTS: STUDENTS MUST PURCHASE THEIR OWN UNIFORMS AND REPLACE LOST OR DAMAGED EQUIPMENT. OTHER COSTS ARE EQUIPMENT - \$125, STATE REGISTRATION - \$15, TUITION - \$995 AND TOTAL COSTS ARE \$1,135.

- - - - - 82070 RICHFIELD BEAUTY SCHOOL

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM INTENDS TO PREPARE STUDENTS TO TAKE AND PASS THE STATE LICENSING EXAM TO BECOME COSMETOLOGISTS. ALL STUDENTS SPEND ONE HOUR PER DAY IN CLASS. THE REST OF THE DAY IS SPENT LEARNING AND PRACTICING SKILLS SUCH AS FINGER AND PERMANENT WAVING, MANICURING, FACIALS, MAKE-UP, CUTTING AND STYLING HAIR, AND COLORING HAIR. STUDENTS PRACTICE ON MANNIQUINS AND EACH OTHER FOR THE FIRST SIX WEEKS. AFTER THAT, THEY WORK ON CUSTOMERS. STUDENTS IN THE 'MANICURING' PROGRAM STUDY MANICURING, PEDICURING, NAIL TIPS, ACRYLIC-MOLD SCULPTURING AS WELL AS THE SCIENCE OF MANICURING.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE COSMETOLOGY PROGRAM REQUIRES COMPLETION OF 1550 HOURS, WHICH USUALLY TAKES 10 MONTHS OF STUDY. THE 'MANICURING' PROGRAM IS 350 HOURS LONG AND TAKES APPROXIMATELY 9 MONTHS TO COMPLETE.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION EXCEPT FOR UNIFORMS.

- - - - - 82071 RITA'S MOORHEAD SCHOOL OF BEAUTY

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM PREPARES STUDENTS TO PASS THE STATE BOARD LICENSING EXAM AND TO BECOME PROFESSIONAL BEAUTICIANS. ENTERING STUDENTS SPEND 6 WEEKS STUDYING THEORY AND PRACTICING SKILLS ON MANNIQUINS AND STUDENTS. THEY STUDY SUBJECTS SUCH AS CHEMISTRY, ELECTRICITY, STRUCTURE OF HAIR, DERMATOLOGY (SKIN CARE), MANICURING, SHAMPOOS AND RINSES, AND HAIR SHAPING AND STYLING. AFTER THEY HAVE COMPLETED THE BASIC STUDIES, STUDENTS MOVE TO THE CLINIC FLOOR, WHERE THEY APPLY WHAT THEY HAVE LEARNED BY WORKING ON CUSTOMERS. THEY ALSO ATTEND DEMONSTRATIONS AND WEEKLY CLASSES ON HAIR CUTTING.

--- DEGREES OFFERED: GRADUATES OF THIS PROGRAM RECEIVE DIPLOMAS.
--- LENGTH OF PROGRAM: THE AVERAGE LENGTH OF THIS PROGRAM IS 10 MONTHS. A MANICURING PROGRAM CAN BE TAKEN SEPARATELY. IT TAKES ABOUT 250 HOURS AND 5 WEEKS TO COMPLETE.
--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$250 FOR THE STUDENT KIT, A \$25 REGISTRATION FEE, AND UNIFORMS. TUITION IS \$1500 FOR THE COSMETOLOGY PROGRAM.

- - - - - 82072 RITTER-SAINT PAUL BEAUTY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM IS DESIGNED TO PROVIDE COSMETOLOGY TRAINING WHICH QUALIFIES STUDENTS TO TAKE THE STATE BOARD EXAM. THE PROGRAM IS DIVIDED INTO 2 PARTS: PRACTICAL INSTRUCTION AND THEORY. THE PRACTICAL INSTRUCTION INCLUDES SHAMPOOS, COLORING, WAVING, MEN'S AND WOMEN'S HAIRCUTTING, WIG AND HAIRSTYLING, MANICURING, FACIALS, BLOW COMBING, AND CURLING IRON. THEORY CLASSES INCLUDE ANATOMY, DERMATOLOGY, CHEMISTRY, LAW, PUBLIC RELATIONS, AND BUSINESS MANAGEMENT, AS WELL AS THE BACKGROUND THEORY WHICH PRECEDES PRACTICAL INSTRUCTION.
--- DEGREES OFFERED: DIPLOMAS ARE ISSUED UPON COMPLETION OF THE COURSE, AND GRADUATES ARE ELIGIBLE TO TAKE THE STATE BOARD EXAMS.
--- LENGTH OF PROGRAM: THE TOTAL COURSE LENGTH IS 1550 HOURS. STUDENTS WHO ATTEND FULL TIME COMPLETE THE PROGRAM IN 10 1/2 MONTHS.
--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$275 FOR EQUIPMENT AND SUPPLIES AND \$195 FOR BOOKS. ALSO, STUDENTS ARE REQUIRED TO PURCHASE THEIR OWN UNIFORMS.

- - - - - 82073 ROBINSON BEAUTY SCHOOL

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM IS DESIGNED TO TRAIN STUDENTS TO ENTER JOBS IN THE FIELD OF HAIRSTYLING AND MANICURING. STUDENTS LEARN BOTH THEORY AND PRACTICAL SKILLS. THEY FIRST STUDY THE ANATOMY, CHEMISTRY, AND CARE OF THE HUMAN BODY. THEN THEY LEARN HAIRSTYLING AND CUTTING, WAVING AND PERMANENTS, COLORING, SCALP, MAKEUP, AND FACIAL TREATMENTS, MANICURING, AND WIGSTYLING. THEY ALSO STUDY SALON MANAGEMENT, SALES, AND PUBLIC RELATIONS.
--- DEGREES OFFERED: GRADUATES RECEIVE DIPLOMAS AND ARE ELIGIBLE TO TAKE THE REQUIRED STATE BOARD EXAMS.
--- LENGTH OF PROGRAM: THE PROGRAM IS 1550 HOURS OR ABOUT 10 MONTHS. A MANICURING PROGRAM MAY BE TAKEN SEPARATELY IN 8-10 WEEKS.
--- SPECIAL COSTS: EVERYTHING IS INCLUDED IN THE TUITION (\$3400). THE TUITION FOR THE MANICURING PROGRAM IS \$800 AND INCLUDES ALL PROGRAM RELATED COSTS INCLUDING UNIFORM TOPS.

- - - - - 82074 COSMETOLOGY TRAINING CENTERS LTD. (ROCHESTER)

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM PREPARES STUDENTS FOR CAREERS AS PROFESSIONAL COSMETOLOGISTS. THE COURSE INCLUDES 440 HOURS OF THEORY, 910 HOURS OF PRACTICAL EXPERIENCE, AND 150 HOURS OF WORK IN A SPECIAL AREA OF INTEREST. MOST OF THE TIME IS SPENT STUDYING HAIRDRESSING AND HAIRSTYLING, PERMANENT WAVING AND HAIR STRAIGHTENING, AND HAIR COLORING. STUDENTS ALSO STUDY CUSTOMER RELATIONS, LAWS, SANITATION, ANATOMY, MANICURING, FACIALS, AS WELL AS SALON MANAGEMENT AND PERSONAL DEVELOPMENT.
--- DEGREES OFFERED: GRADUATES RECEIVE DIPLOMAS AND ARE ELIGIBLE TO TAKE THE REQUIRED STATE BOARD EXAMS.
--- LENGTH OF PROGRAM: THE COURSE IS 1550 HOURS, OR ABOUT 10 MONTHS LONG.
--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION FIGURE (\$3350) EXCEPT SHOES AND UNIFORMS.

- - - - - 82075 ST. CLOUD BEAUTY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM PREPARES STUDENTS FOR CAREERS AS COSMETOLOGISTS. IT ALSO PREPARES THEM TO SUCCESSFULLY COMPLETE THE STATE BOARD OF COSMETOLOGY EXAMINATION. COURSES OF INSTRUCTION INCLUDE THEORY, WIG CARE, SHAMPOOING, HAIR TINTING AND LIGHTENING, COLD WAVING, HAIR CUTTING, MANICURING, CREATIVE HAIR STYLING, AND ALSO RULES OF SAFETY. ONE COURSE IN BUSINESS MANAGEMENT IS ALSO REQUIRED. AN ELECTROLYSIS, MANICURING AND ESTHETICIAN COURSE IS ALSO OFFERED. A NIGHT SCHOOL AND PART TIME PROGRAM IN COSMETOLOGY OR ELECTROLYSIS IS OFFERED WITH THE SAME OBJECTIVES, DEGREES AND SPECIAL COSTS. THE 'MANICURING' PROGRAM PREPARES STUDENTS FOR EMPLOYMENT IN THE FIELD OF NAIL CARE. THE MANICURING PROGRAM OFFERS INSTRUCTION IN NAIL TIPS, NAIL WRAPS (BOTH PAPER AND SILK), SCULPTURED NAILS, AND PEDICURING. STUDENTS BECOME PROFICIENT IN ALL AREAS OF NAIL DESIGN WHICH ARE CALLED FOR BY CURRENT INDUSTRY TRENDS. THE 'ESTHETICIAN' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR EMPLOYMENT IN THE FIELD OF SKIN CARE. BOTH PROFESSIONAL AND CREATIVE TECHNIQUES ARE STUDIED, AND STUDENTS LEARN EVERY APPLICATION OF CLEANSING TREATMENTS, FACIALS, MESSAGES, FOUNDATIONS, CORRECTIVE MAKEUP, ETHNIC MAKEUP, COLOR VARIATIONS, TONING, AND CONTOURING. DIFFERENT PRODUCTS AND THE USE OF SPECIAL TOOLS ARE ALSO STUDIED.

--- DEGREES OFFERED: A DIPLOMA OR CERTIFICATE OF COMPLETION IS OFFERED.

--- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAM IS 1550 HOURS (APPROXIMATELY 10 MONTHS). NIGHT SCHOOL AND PART TIME STUDENTS ON A HALF-TIME BASIS CAN FINISH IN ABOUT 20 MONTHS. THE ELECTROLYSIS PROGRAM REQUIRES 120 HOURS OF TRAINING. THE MANICURING PROGRAM REQUIRES 350 HOURS OF TRAINING AND ESTHETICIAN REQUIRES 600 HOURS.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION EXCEPT UNIFORMS.

- - - - - 82076 HAIRDRESSER'S EDUCATIONAL CENTER

--- OBJECTIVES OF THE PROGRAM: THE PURPOSE OF THE 'COSMETOLOGY' PROGRAM IS TO TRAIN STUDENTS TO BECOME PROFESSIONAL HAIRDRESSERS. STUDENTS RECEIVE BOTH THEORETICAL AND PRACTICAL TRAINING IN HAIRCUTTING, COLORING, PERMANENT WAVING, SHAMPOOING, MANICURING, WIGGERS, IRON CURLING, AIR WAVING, AND SCALP AND FACIAL TREATMENTS. THEY ALSO LEARN ABOUT SHOP MANAGEMENT AND CUSTOMER RELATIONS. AN ESTHETICIAN AND MANICURING PROGRAM ARE OFFERED.

--- DEGREES OFFERED: STUDENTS RECEIVE DIPLOMAS UPON COMPLETION OF THIS PROGRAM AND ARE ELIGIBLE TO TAKE THE STATE BOARD EXAMS.

--- LENGTH OF PROGRAM: THE COSMETOLOGY PROGRAM REQUIRES 1550 HOURS OF STUDY, WHICH STUDENTS USUALLY COMPLETE IN 10 MONTHS. THE ESTHETICIAN PROGRAM IS 600 HOURS AND THE MANICURING PROGRAM IS 350 HOURS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE THE PURCHASE OF UNIFORMS AND SHOES. THE TUITION FOR THE COSMETOLOGY PROGRAM IS \$1800, FOR THE ESTHETICIAN PROGRAM IS \$720 AND FOR THE MANICURING PROGRAM IS \$420. STUDENT KITS FOR THE ESTHETICIAN PROGRAM COST \$125, FOR THE MANICURING PROGRAM COST \$65 AND FOR THE COSMETOLOGY PROGRAM COST \$225.

- - - - - 82077 FERN'S BEAUTY SCHOOL

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM PROVIDES STUDENTS WITH THE SKILLS AND KNOWLEDGE NEEDED FOR EMPLOYMENT IN THE BEAUTY FIELD. THE PROGRAM IS DIVIDED INTO 1130 HOURS OF CLINIC FLOOR WORK AND 420 HOURS OF THEORY STUDY. IN ADDITION TO COURSE WORK IN HAIRSTYLING, WAVING, COLORING, MANICURING, FACIALS, AND WIGGERS, STUDENTS STUDY STATE LAW, CUSTOMER RELATIONS, AND SALON MANAGEMENT. THEY ALSO STUDY SANITATION AND

STERILIZATION AND ANATOMY AND PHYSIOLOGY AS THEY APPLY TO COSMETOLOGY.

--- DEGREES OFFERED: GRADUATES RECEIVE DIPLOMAS AND ARE ELIGIBLE TO TAKE THE REQUIRED STATE BOARD EXAM FOR LICENSURE.

--- LENGTH OF PROGRAM: THE PROGRAM IS ABOUT 10 MONTHS (1550 HOURS) LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE UNIFORMS AND SHOES.

- - - - - 82078 VERA SLATER BEAUTY SCHOOL

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' COURSE PREPARES STUDENTS TO ENTER THE COSMETOLOGY FIELD IN POSITIONS SUCH AS HAIRSTYLIST, COLORIST, OR PERMANENT WAVE TECHNICIAN. STUDENTS STUDY ALL ASPECTS OF HAIRSTYLING INCLUDING SHAPING, SCALP TREATMENT, SHAMPOOS AND RINSES, PERMANENT WAVING, AIR WAVING, IRON CURLING, AND WIGGERY. THEY ALSO STUDY MANICURING, FACIALS, MAKE UP, AND GROOMING, AND BUSINESS-RELATED SUBJECTS SUCH AS MINNESOTA LAWS, SALON MANAGEMENT, AND SALES. STUDENTS MAY CHOOSE A MANICURIST OR ESTHETICIAN PROGRAM.

--- DEGREES OFFERED: GRADUATES RECEIVE DIPLOMAS OF GRADUATION AND ARE ELIGIBLE FOR CERTIFICATION.

--- LENGTH OF PROGRAM: THE BASIC COURSE IS 1550 HOURS LONG, WHICH REQUIRES 40 WEEKS OF FULL-TIME STUDY. THE MANICURIST PROGRAM CAN BE TAKEN SEPARATELY IN 350 HOURS. THE ESTHETICIAN PROGRAM MAY BE FINISHED IN 600 HOURS.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION (\$3000) EXCEPT FOR UNIFORMS, SHOES AND EXTRA SUPPLIES. ALL PROGRAM RELATED COSTS FOR THE MANICURING PROGRAM ARE ALSO INCLUDED IN THE TUITION (\$650). THE ESTHETICIAN PROGRAM COSTS \$1350.00.

- - - - - 82079 VIRGINIA SCHOOL OF BEAUTY CULTURE, INC.

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM IS DESIGNED TO PREPARE STUDENTS TO TAKE THE STATE BOARD EXAMS TO BECOME LICENSED COSMETOLOGISTS. ALL PHASES OF COSMETOLOGY ARE TAUGHT IN THE PROGRAM. THESE INCLUDE SHAMPOOS, SCALP TREATMENTS, COLD WAVES, CHEMICAL HAIR RELAXING, STYLING AND SHAPING, WIGGERY, TINTING, FACIALS, AND MANICURING. STUDENTS STUDY THE THEORY AND COMPLETE CLINICAL PRACTICE IN THESE AREAS. THEY ALSO COMPLETE THEORY STUDIES IN AREAS SUCH AS ANATOMY, CHEMISTRY, AND THE DISEASES OF SKIN, SCALP, HAIR, AND NAILS. A MANICURING PROGRAM AND ESTHETICIAN PROGRAM IS ALSO OFFERED.

--- DEGREES OFFERED: GRADUATES RECEIVE CERTIFICATES OF COMPLETION.

--- LENGTH OF PROGRAM: THE PROGRAM REQUIRES 1550 HOURS OF STUDY WHICH CAN BE COMPLETED IN 10 TO 11 MONTHS.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION FIGURE (\$2000) EXCEPT UNIFORMS. THE MANICURING PROGRAM MAY BE TAKEN SEPARATELY. TUITION (\$500) INCLUDES ALL PROGRAM RELATED COSTS EXCEPT UNIFORMS. THE ESTHETICIAN PROGRAM COSTS \$1000.

- - - - - 82080 HORST EDUCATION CENTER FOR COSMETOLOGY

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM TRAINS STUDENTS TO BECOME PROFESSIONAL COSMETOLOGISTS. THE PROGRAM IS DIVIDED INTO 7 AREAS: NUTRITION, EXERCISE, THE SCIENCE OF HERBAL PRODUCTS, HAIR CUTTING AND DESIGN, SKIN CARE, CAREER PLANNING, AND ATTITUDE. STUDENTS LEARN THROUGH A COMBINATION OF THEORY CLASSES, MANNEQUIN PRACTICE AND CLINIC FLOOR WORK. SUBJECTS ARE COVERED BY OUTSIDE LECTURERS AND DEMONSTRATORS. STUDENTS ALSO STUDY MAKE-UP AND FACIALS. THE 700 HOUR 'ESTHIOLOGY' PROGRAM TRAINS STUDENTS TO PASS THE SKILL CERTIFICATION EXAMINATION IN THE AREA OF SKIN CARE, FACIALS, AND MAKE-UP USING THE SEVEN STEPS OF BEAUTY. NUTRITION, EXERCISE, EXTERNAL FOODS, COSMETIC PRODUCTS WHICH FEED THE BODY, DEEP CLEANSING THE BODY INSIDE AND OUT, AESTHETICS-FASHION, HAIR, AND MAKEUP,

THERAPEUTIC MASSAGE, BUSINESS PHILOSOPHY AND PSYCHOLOGY ARE STUDIED.

--- DEGREES OFFERED: GRADUATES OF THIS PROGRAM RECEIVE DIPLOMAS AND ARE ELIGIBLE TO TAKE THE SKILL CERTIFICATION EXAMINATION.

--- LENGTH OF PROGRAM: STUDENTS ATTEND FULL TIME AND COMPLETE THE COSMETOLOGY PROGRAM IN ABOUT 10 MONTHS (1550 HOURS). THE ESTHIOLOGY PROGRAM IS 700 HOURS LONG

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$350 FOR A KIT, MATERIALS AND UNIFORMS FOR COSMETOLOGY AND \$150 FOR A KIT AND UNIFORM FOR ESTHIOLOGY.

- - - - - 82085 ST. PAUL BARBER SCHOOL

--- OBJECTIVES OF THE PROGRAM: THE 'BARBER TRAINING' PROGRAM PROVIDES FUNDAMENTAL TRAINING LEADING TO THE APPRENTICE BARBER LICENSE EXAM. STUDENTS SPEND 1 1/2 HOURS PER DAY STUDYING CLASSROOM SUBJECTS SUCH AS INTRODUCTORY ANATOMY AND RELATED SCIENCES, INTRODUCTORY PSYCHOLOGY AND BUSINESS RELATIONS, AND BASIC SALES. THEY SPEND 6 1/2 HOURS PER DAY IN APPLIED PRACTICE, LEARNING SKILLS SUCH AS CUTTING, STYLING, SHAVING, TRIMMING BEARDS AND MUSTACHES, HAIR COLORING, GIVING PERMANENTS, AND DOING FACIALS.

--- DEGREES OFFERED: GRADUATES RECEIVE CERTIFICATES OF COMPLETION.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 1500 HOURS LONG, TO BE COMPLETED IN NINE MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$424 FOR TOOLS AND TAX, \$75 MISCELLANEOUS FEES, AND A \$150 REGISTRATION FEE. TUITION IS \$2976.

- - - - - 82086 SCOT-LEWIS FLORIAN SCIENTIFIC SCHOOL OF COSMETOLOGY

--- OBJECTIVES OF THE PROGRAM: THE 'COSMETOLOGY' PROGRAM TRAINS STUDENTS IN THE FIELD OF COSMETOLOGY AND PREPARES THEM TO SUCCESSFULLY COMPLETE THE MULTI-STATE LICENSING EXAM PLUS PRACTICAL AND CHEMICAL CERTIFICATION. COURSE WORK INCLUDES HAIR AND SCALP TREATMENTS, MANICURING, PEDICURING AND ACRYLIC NAILS, HAIR COLORING, REDKEN SCIENTIFIC EDUCATION SYSTEM, BASIC AND PIVOT POINT HAIR STYLING, WIGGERY, BUSINESS ADMINISTRATION, STATE LAWS AND REGULATIONS, AND SALES-MARKETING. A MANICURING PROGRAM IS OFFERED SEPARATELY AND PREPARES STUDENTS TO TAKE THE MULTI-STATE LICENSING EXAM. MAKEUP AND SKIN CARE ARE INCLUDED IN THE COSMETOLOGY COURSE.

--- DEGREES OFFERED: GRADUATING STUDENTS ARE AWARDED A DIPLOMA, AND THEN MUST PASS THE MULTI-STATE LICENSING EXAM PLUS PRACTICAL AND CHEMICAL CERTIFICATION IN ORDER TO PRACTICE. ALL STUDENTS RECEIVE A SPECIAL CERTIFICATE FOR COMPLETING THE PIVOT POINT PROGRAM AND/OR THE REDKEN TRICHOANALYST PROGRAM.

--- LENGTH OF PROGRAM: THE PROGRAM IS 10 MONTHS LONG INCLUDING HOLIDAYS AND ANNUAL BREAK (1550 HOURS). THE MANICURING PROGRAM REQUIRES 350 HOURS OF TRAINING.

228 HAIR DESIGN TRANSFER PROGRAMS:

- - - - - 27140 BRAINERD COMMUNITY COLLEGE

Health education is the study of attitudes and behaviors which influence personal and community health choices. Programs in health education intend to prepare people for jobs in private and public health agencies and schools. These jobs include health education teachers, school health coordinators, state school health specialists, athletic trainers, health researchers and statisticians, and community health educators with public health departments, voluntary agencies, and hospitals. Program options include: school health education, community health education, public health certificate, driver education, and athletic training.

Physical education is the study of human movement. Programs in physical education intend to prepare people for jobs in teaching, fitness management, exercise science, sports medicine, coaching, or a combination of these areas. Programs may have emphases in aquatic sports, teaching, coaching, dance, prephysical therapy, athletic training, sports medicine recreation, or commercial/industrial fitness (managing small business or industry programs).

Health and physical education programs are usually found at colleges and universities. They include bachelor's, master's, and doctoral degree programs. Students who plan to teach health or physical education may need certification. (See PREP 8456.)

---PROGRAM ADMISSION: A background in biology, chemistry or physics, social studies, physical education, health, and English composition is helpful.

---TYPICAL COURSE WORK: During their first and sophomore years, physical education students usually take basic liberal arts and science courses, and some physical activity courses. These courses can be taken at a community college. During their junior and senior years they usually study human movement and physical education theory. Students in graduate programs usually specialize in one area of physical education. Courses in these programs include:

Kinesiology	Motor Development
Coaching	Human Anatomy
Exercise Physiology	First Aid
Organization and Administration of P.E.	Sport Studies
Care and Prevention of Athletic Injuries	Lifesaving
	Professional Activities (instruction and practice in sports)

Health education courses include:

Bacteriology	Community Health Problems
Nutrition	Physiology of Exercise
Chemistry	Health Administration
First Aid	Safety Education
Biology	Kinesiology
Drug Education	Environmental Health
Sex Education	Mental Health

Students preparing for teacher certification in health or physical education usually take the following courses:

Teaching Methods in P.E./Health	Educational Media
Educational Psychology	Child Psychology
	Student Teaching

Adolescent Psychology
Teaching of Reading and
Writing

Social Foundations of
Education

---GRADUATION REQUIREMENTS: Many education departments require students to maintain at least an overall 2.5 GPA to remain in the program. Professional education courses must be passed with a better than 'C' average.

---THINGS TO KNOW: Some schools combine physical education with health, allowing students to specialize in either. In order to meet certification requirements to teach both health and physical education, a double major may be required.

---RELATED PROGRAMS: PROG 236 Secondary Education, 234 Early Childhood and Elementary Education, 237 Special Education, 315 Dance, 367 Rehabilitation Services (for physical therapy programs).

---DIRECTLY RELATED OCCUPATIONS: DESC 8453 Elementary School Teachers, 8457 Secondary School Teachers, 8486 Recreation Leaders.

ASSOCIATED OCCUPATION: DESC 9871 Athletes.

---REFERENCES:

Board of Teaching
550 Cedar Street, 6th Floor
Capitol Square Building
St. Paul, MN 55101

CIPS: 13.1307
13.1314

SCHOOLS:

- - - - - 26073 ST. CLOUD STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: 'HEALTH EDUCATION,' 'COMMUNITY HEALTH,' AND 'CHEMICAL DEPENDENCY' PROGRAMS ARE OFFERED THROUGH THE DEPARTMENT OF HEALTH, PHYSICAL EDUCATION AND RECREATION. THESE PROGRAMS UTILIZE KNOWLEDGE, ACTIVITIES, AND EXPERIENCES TO HELP STUDENTS DEVELOP AND MAINTAIN MENTAL AND PHYSICAL EFFICIENCY, ACQUIRE SKILLS, CONDUCT THEMSELVES IN SOCIALLY ACCEPTABLE WAYS, AND PURSUE A WHOLESOME LIFESTYLE.

'PHYSICAL EDUCATION' INSTRUCTION IS OFFERED THROUGH THE DEPARTMENT OF HEALTH, PHYSICAL EDUCATION AND RECREATION. THE PROGRAM MAKES USE OF KNOWLEDGE, ACTIVITIES, AND EXPERIENCES TO HELP STUDENTS DEVELOP AND MAINTAIN MENTAL AND PHYSICAL EFFICIENCY, ACQUIRE SKILLS, CONDUCT THEMSELVES IN SOCIALLY ACCEPTABLE WAYS, AND ENJOY WHOLESOME LIVING. TEACHING TRAINING MAY ALSO BE INCLUDED.

--- DEGREES OFFERED: A BACHELOR OF SCIENCE DEGREE IS AVAILABLE IN HEALTH EDUCATION, COMMUNITY HEALTH, AND ELECTIVE STUDIES. IN CONJUNCTION WITH THE DEPARTMENT OF PSYCHOLOGY, A CHEMICAL DEPENDENCY CERTIFICATE IS AVAILABLE. A MASTER OF SCIENCE DEGREE IN HEALTH EDUCATION IS ALSO AVAILABLE. A BACHELOR OF ARTS OR BACHELOR OF SCIENCE DEGREE IN PHYSICAL EDUCATION AND A MASTER OF SCIENCE DEGREE IN PHYSICAL EDUCATION WITH AN EMPHASIS ON PHYSICAL EDUCATION IS OFFERED. A BACHELOR OF SCIENCE (NON-TEACHING) DEGREE IN RECREATION IS ALSO OFFERED.

Secondary education programs intend to prepare people to teach middle school, junior high, and high school classes. These are usually four to five year programs that end in bachelor's degrees, professional certificates, and in some cases, master's degrees. They are found at colleges and universities. Secondary education programs intend to teach students about teaching theories and methods, plus give them techniques to create, carry out, and evaluate classroom learning activities. Most states require teachers to be certified. (See PREP 8457.)

---PROGRAM ADMISSION: Some programs require letters of recommendation and at least a 2.0 GPA. Check with the education department of the school you plan to attend for specific entrance requirements. Some schools require that students pass reading, computation, and writing skill tests.

---TYPICAL COURSE WORK: Classes are usually taught through lectures and discussions, plus field experience. Most secondary education programs have four areas of study. These are a strong liberal arts background, a teachable academic major (for instance, English), professional education courses, and field experience. Professional education courses may include:

Educational Psychology	Adolescent Psychology
Tests and Measurements	Teaching Methods
Curriculum	Philosophy of Education
Content Area Reading	Educational Media
Skills	

Field experience includes assignments to school classes early in the program. The first ones may just be observations of a classroom. Later, a student is usually assigned to a classroom teacher (known as a master teacher), and class in the subject area of his/her academic major. Student teaching begins with the student gradually becoming more responsible for the classroom activities and lessons. Student teaching may be half days for one or two semesters or full time for six to fifteen weeks.

---GRADUATION REQUIREMENTS: Many education departments require students to maintain at least an overall 2.0 GPA to remain in the program. Professional education courses must be passed with at least a 'C' grade.

---THINGS TO KNOW: For a list of what must be done to be certified as a teacher in a particular state, contact that state's Department of Education.

---RELATED PROGRAMS: PROG 234 Early Childhood and Elementary Education, 235 Health and Physical Education, 237 Special Education, 238 Counseling, 231 Education Administration, 461 Library Science.

---DIRECTLY RELATED OCCUPATIONS: DESC 8453 Elementary School Teachers, 8457 Secondary School Teachers.

ASSOCIATED OCCUPATIONS: DESC 1422 Teacher Aides, 8454 University and College Teachers.

---REFERENCES: The National Council for Accreditation of Teacher Education (NCATE) certifies teaching programs nationally. Graduates from schools with national accreditation can usually be licensed to teach in other states on request. For a free list of nationally accredited institutions, write:

'Annual List'

NCATE

1750 Pennsylvania Avenue, NW
Washington, D.C. 20006

For licensing information contact:

Board of Teaching
550 Cedar Street, 6th Floor
Capitol Square Building
St. Paul, MN 55101

CIPS: 13.13 (except 13.1307 and 13.1314)
13.1203
13.1205
13.1299
13.99

SCHOOLS:

- - - - - 81004 UNIVERSITY OF MINNESOTA - CROOKSTON TECHNICAL
COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'DISTRIBUTIVE EDUCATION' CURRICULA IS A PREPROFESSIONAL PROGRAM DESIGNED FOR STUDENTS DESIRING TO ENTER DISTRIBUTIVE EDUCATION. STUDENTS COMPLETE TWO YEARS AT UMC AND THEN TRANSFER TO A BACCALAUREATE DEGREE PROGRAM IN DISTRIBUTIVE EDUCATION AT THE UNIVERSITY'S MINNEAPOLIS CAMPUS OR ANOTHER COLLEGE OR UNIVERSITY. THE 'BUSINESS EDUCATION' CURRICULA IS A PREPROFESSIONAL PROGRAM DESIGNED FOR STUDENTS DESIRING TO ENTER BUSINESS EDUCATION. STUDENTS COMPLETE TWO YEARS AT UMC AND THEN TRANSFER TO A BACCALAUREATE DEGREE PROGRAM IN BUSINESS EDUCATION AT THE UNIVERSITY'S MINNEAPOLIS CAMPUS OR ANOTHER COLLEGE OR UNIVERSITY.

--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THESE ARE TWO YEAR PROGRAMS.

Special education programs intend to prepare people to teach handicapped or gifted students whose physical, emotional, mental, or social needs require a special curriculum and educational setting. Instruction may cover different age levels, such as preschool, elementary, secondary, or adult levels. Programs may also cover different settings such as regular classrooms, resource rooms, college classes, administration offices, or research, consulting, or adult residential living centers. Program emphases include severe developmental disabilities, learning disorders, behavioral disorders, and gifted children. Bachelor's, master's, and doctoral degrees and professional certificates are available in special education. These programs are usually found at colleges and universities.

Students who plan to become teachers may need to be certified. (See PREP 8453, 8457, 8458.)

---PROGRAM ADMISSION: Some programs require letters of recommendation. Graduate programs may give priority to those with a bachelor's degree in education. Check with the special education department of the school you plan to attend for specific entrance requirements.

---TYPICAL COURSE WORK: Most special education classes include lectures and discussions. Field experience or student teaching classes are also included. Courses may include:

Mentally Retarded Child	Mainstreaming Exceptional
Emotionally Disturbed	Children in Regular
Child	Classroom
Physically Disabled Child	Psychology of the
Mentally Gifted Child	Exceptional Child
Behavior Modification	Survey of Handicaps
Techniques	Diagnosing Learning Problems
Classroom Behavior	Vocational Education
Management	Research
Writing Individual	Counseling
Education Programs	Adult Services
(IEP's)	Methods, Materials, and
	Curriculum Planning

---GRADUATION REQUIREMENTS: Requirements vary. See college catalogs for more information.

---RELATED PROGRAMS: PROG 234 Early Childhood and Elementary Education, 236 Secondary Education, 238 Counseling, 368 Speech Pathology and Audiology, 367 Rehabilitation Services.

---DIRECTLY RELATED OCCUPATIONS: DESC 8453 Elementary School Teachers, 8457 Secondary School Teachers, 8458 Vocational Education Teachers.

ASSOCIATED OCCUPATIONS: DESC 1136 Education Administrators, 8454 College and University Teachers, 1422 Teacher Aides, 8127 Speech Pathologists and, 8129 Audiologists.

---REFERENCES:

School Personnel Licensing and Placement
550 Cedar Street, 6th Floor
St. Paul, MN 55101

CIPS: 13.10 (except 13.1012)

SCHOOLS:

- - - - - 83004 SAINT MARY'S JUNIOR COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'SPECIAL EDUCATION ASSOCIATE' PROGRAM PREPARES STUDENTS TO WORK IN THE FIELD OF MENTAL RETARDATION UNDER PROFESSIONAL SUPERVISION. STUDENTS COMPLETE GENERAL EDUCATION COURSES AS WELL AS TECHNICAL STUDIES. CLASSROOM AND CLINICAL OR FIELD WORK ARE INCLUDED IN THE CURRICULUM. THE 'HEALTH CARE INTERPRETER' PROGRAM EDUCATES STUDENTS TO BE FLUENT IN ALL FORMS OF MANUAL COMMUNICATION, AT EASE IN A HEALTH CARE SETTING, COMFORTABLE IN THEIR USE OF MEDICAL TERMINOLOGY, AND FAMILIAR WITH MEDICAL PRACTICES. THE PROGRAM FOCUSES ON THREE MAJOR AREAS OF HEALTH CARE INTERPRETING: THE INTERPRETING SKILL, THE HEALTH CARE SETTING, AND ETHICS AND INTERPERSONAL SKILLS.

--- DEGREES OFFERED: THE SPECIAL EDUCATION ASSOCIATE PROGRAM OFFERS THE ASSOCIATE OF APPLIED SCIENCE DEGREE. THE HEALTH CARE INTERPRETER PROGRAM MAY BE TAKEN FOR A CERTIFICATE OR AN ASSOCIATE OF APPLIED SCIENCE DEGREE, DEPENDING UPON SKILL LEVEL AND PREVIOUS ACADEMIC COURSEWORK.

--- LENGTH OF PROGRAM: THE SPECIAL EDUCATION PROGRAM IS 6 QUARTERS; THE HEALTH CARE INTERPRETER PROGRAM IS 6-11 QUARTRS LONG, DEPENDING ON FULL OR PART-TIME STATUS OF STUDENT.

Programs in counseling are designed to prepare students to work as counselors in family counseling centers, in schools, and in social service, correction, and mental health agencies. Counselors use their skills to help clients better understand themselves and their environment and to make decisions about problems facing them. Counseling programs are generally offered at the graduate level, although some schools offer a four-year bachelor's degree. Each state has established its own criteria for counselor certification. In many states a school counselor is also required to be a state-certified teacher. (For details, see PREP 8412.)

---PROGRAM ADMISSION: Most graduate programs in counseling require an undergraduate background in the behavioral or social sciences.

---TYPICAL COURSE WORK: Instruction consists of lectures, reading, papers, and supervised field experience. Course work varies depending upon area of specialization. Most programs include a core curriculum such as:

Developmental Psychology	Occupational Analysis
Group and Individual	Interpretation and Use
Counseling Theories	of Tests in Coun-
and Techniques	seling

Many schools may also require courses in statistics and abnormal psychology. Students receive supervised counseling experience on campus and in schools or agencies. See college catalogs for a more complete description of course work.

---GRADUATION REQUIREMENTS: Many graduate counseling programs require a comprehensive examination, a thesis, or both, upon completion of course work. See college catalogs for details.

---THINGS TO KNOW: Part-time graduate study in counseling is readily available. Effective verbal and written communication is an essential part of the counseling process. Therefore, some graduate programs require that master's candidates demonstrate their competence by passing an English usage examination, usually during the first semester of study. A graduate degree in counseling is required by practically all employers for professional positions. There are some counselor aide jobs available to holders of bachelor's degrees.

---RELATED PROGRAMS: PROG 541 Psychology, 234 Early Childhood and Elementary Education, 237 Special Education, 231 Education Administration, 565 Social Service.

---DIRECTLY RELATED OCCUPATION: DESC 8412 Counselors, 8414 School Counselors.

ASSOCIATED OCCUPATIONS: DESC 8418 Psychologists, 8453 Elementary School Teachers, 8457 Secondary School Teachers, 8417 Social Workers, 8421 Probation Officers, 8435 Clergy.

---REFERENCES:

School Personnel Licensing and Placement
550 Cedar Street, 6th Floor
St. Paul, MN 55101

Board of Psychology
717 Delaware Street S.E., Room 343
Minneapolis, MN 55414

CIPS: 13.11
17.04
18.16

SCHOOLS:

- - - - - 27144 ITASCA COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'HUMAN SERVICES' PROGRAM PROVIDES THE STUDENT INTERESTED IN WORKING WITH PEOPLE A SOLID FOUNDATION IN THE SKILLS AND KNOWLEDGE NECESSARY TO BE AN EFFECTIVE HELPER IN THE HUMAN SERVICES PROFESSION. THE PROGRAM ALLOWS THE STUDENT TO DEVELOP A PERSONAL STYLE, THEREBY ENHANCING RATHER THAN CHANGING ANY HUMAN RELATIONS SKILLS HE OR SHE MIGHT ALREADY HAVE.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS TWO YEARS LONG.

- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE BASIC OBJECTIVE OF THE 'CHEMICAL DEPENDENCY TRAINING' PROGRAM IS TO TRAIN PERSONS TO BECOME COMPETENT COUNSELORS AT THE ENTRY LEVEL OF THE HELPING PROFESSION. THE PROGRAM PRESENTS THE CONTINUUM OF THEORETICAL FOUNDATIONS OF ADDICTION PLUS A STRONG EXPERIENTIAL COMPONENT ON THE ACQUISITION AND INTEGRATION OF COUNSELING SKILLS. IN ADDITION TO CORE PROGRAM REQUIREMENTS, STUDENTS ARE REQUIRED TO TAKE ELECTIVE COURSES OFFERED IN SPECIAL INTEREST AREAS, SUCH AS FAMILY COUNSELING, ADOLESCENT COUNSELING AND CROSS-CULTURAL COUNSELING.

--- DEGREES OFFERED: THE TRAINING PROGRAM IS TWO YEARS LONG AND MAY BE ACCOMPLISHED CONCURRENTLY WITH AN ASSOCIATE DEGREE IN APPLIED SCIENCE.

--- LENGTH OF PROGRAM: THE PROGRAM IS FIVE TO SIX ACADEMIC QUARTERS.

- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'CHEMICAL DEPENDENCY SPECIALIST' PROGRAM PROVIDES ENTRY-LEVEL AND IN-SERVICE SEMIPROFESSIONAL SKILLS ASSOCIATED WITH COUNSELING CHEMICALLY DEPENDENT CLIENTS. STUDENTS WILL GAIN SCIENTIFIC KNOWLEDGE OF CHEMICAL DEPENDENCY DIAGNOSIS, INTERVIEWING, GROUP COUNSELING, AND RECORD KEEPING. THE PROGRAM PREPARES GRADUATES FOR APPLICATION FOR MINNESOTA CHEMICAL DEPENDENCY ASSOCIATION CERTIFICATION.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS AWARDED ON COMPLETION.

--- LENGTH OF PROGRAM: 90 QUARTER HOURS IS THE MINIMUM REQUIREMENT FOR THE ASSOCIATE DEGREE.

- - - - - 81001 UNIVERSITY OF MINNESOTA (DULUTH)

--- OBJECTIVES OF THE PROGRAM: AN ASSOCIATE DEGREE IN 'MENTAL HEALTH' IS OFFERED TO PROVIDE A SPECIALIZED PROGRAM OPTION TO TRAIN AMERICAN INDIAN MENTAL HEALTH COUNSELORS. THE COURSE WORK WILL ADDRESS THE NEEDS OF PEOPLE WHO WILL BE TRAINING TO BE AMERICAN INDIAN PARAPROFESSIONAL MENTAL HEALTH WORKERS. THIS 96 QUARTER CREDIT HOUR PROGRAM TRAINS PARAPROFESSIONALS TO EXCLUSIVELY SERVE THE MINNESOTA CHIPPEWA TRIBE.

THE 'EDUCATION COUNSELING' PROGRAMS ARE OFFERED THROUGH THE GRADUATE

SCHOOL. THESE PROGRAMS PREPARE COUNSELORS TO WORK IN SCHOOL AND COMMUNITY AGENCIES.

--- DEGREES OFFERED: THE ASSOCIATE IN APPLIED SCIENCE/A.A.S. DEGREE IS OFFERED FOR THE MENTAL HEALTH PROGRAM. GRADUATE PROGRAMS OFFER A MASTER OF ARTS.

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: THE 'EDUCATIONAL COUNSELING' PROGRAMS ARE OFFERED THROUGH THE GRADUATE SCHOOL. THE 'PSYCHOLOGY IN THE SCHOOLS TRAINING PROGRAM' PREPARES PSYCHOLOGISTS FOR WORK IN SCHOOL SETTINGS AND COMMUNITY AGENCIES. THE 'COUNSELING AND STUDENT PERSONNEL PSYCHOLOGY' PROGRAM OFFERS OPTIONS IN SCHOOL COUNSELING, COUNSELING PSYCHOLOGY, AND COLLEGE PERSONNEL WORK. THE 'EDUCATIONAL PSYCHOLOGY' PROGRAM OFFERS PREPARATION FOR RESEARCH AND TEACHING.

--- DEGREES OFFERED: SPECIALIST CERTIFICATES AND DOCTOR OF PHILOSOPHY DEGREES ARE OFFERED IN PSYCHOLOGY IN THE SCHOOLS PROGRAM. THE MASTER OF ARTS, PH.D, AND SPECIALIST CERTIFICATE ARE OFFERED IN COUNSELING AND STUDENT PERSONNEL PSYCHOLOGY. THE M.A. AND PH.D DEGREES ARE OFFERED IN EDUCATIONAL PSYCHOLOGY.

- - - - - 81005 UNIVERSITY OF MINNESOTA-WASECA TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE HOME AND FAMILY SERVICES DIVISION OFFERS MAJORS IN 'CHILD CARE SERVICES', 'FAMILY MERCHANDISING', 'RURAL HOME SERVICES' WITH AN OPTION IN 'SERVICES TO THE RURAL ELDERLY', AND 'RURAL YOUTH AND RECREATION'. THESE PROGRAMS TRAIN AIDES AND TECHNICIANS WHO PROVIDE SERVICES FOR RURAL FAMILIES. STUDENTS TAKE AGRICULTURE AND RELATED EDUCATION COURSES AS WELL AS A PRE-OCCUPATIONAL PREPARATION UNIT AND COURSES IN THEIR MAJORS. NOTE: NOT NOW ACCEPTING STUDENTS IN RURAL YOUTH AND RECREATION MAJOR.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IN HOME AND FAMILY SERVICES IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2-YEAR PROGRAM.

- - - - - 83004 SAINT MARY'S JUNIOR COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'CHEMICAL DEPENDENCY FAMILY TREATMENT' (CDFT) PROGRAM PREPARES GRADUATES TO FUNCTION AS ENTRY-LEVEL COUNSELORS IN A VARIETY OF COMMUNITY AGENCIES AND TREATMENT FACILITIES. THE PROGRAM EMPHASIZES UNDERSTANDING CHEMICAL DEPENDENCY AS A DISEASE, ITS FUNCTION WITHIN SYSTEMS (THE FAMILY SYSTEM, THE WORK SYSTEM, THE SOCIAL SYSTEM), AND ITS IMPACT UPON RELATIONSHIPS. STUDENTS LEARN BASIC CONCEPTS ABOUT CHEMICAL DEPENDENCY, FAMILY SYSTEMS, GROUP PROCESS AND COUNSELOR SELF-CARE. THEY ALSO TAKE COUNSELING SKILLS COURSES IN WHICH THEY HAVE AN OPPORTUNITY TO LEARN, PRACTICE, AND GET FEEDBACK ON THEIR PRACTICE OF SUCH SKILLS.

--- DEGREES OFFERED: GRADUATES OF THIS PROGRAM RECEIVE A CERTIFICATE.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 4-8 QUARTERS, DEPENDING ON THE FULL OR PART-TIME STATUS OF STUDENT.

238 COUNSELING TRANSFER PROGRAMS:

- - - - - 27139 AUSTIN COMMUNITY COLLEGE
- - - - - 27140 BRAINERD COMMUNITY COLLEGE
- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27144 ITASCA COMMUNITY COLLEGE
- - - - - 27145 WILLMAR COMMUNITY COLLEGE

- - - - -	27146	WORTHINGTON COMMUNITY COLLEGE
- - - - -	27147	VERMILION COMMUNITY COLLEGE
- - - - -	27148	ROCHESTER COMMUNITY COLLEGE
- - - - -	27149	NORTHLAND COMMUNITY COLLEGE
- - - - -	27150	MESABI COMMUNITY COLLEGE
- - - - -	27151	MINNEAPOLIS COMMUNITY COLLEGE
- - - - -	27152	ANOKA-RAMSEY COMMUNITY COLLEGE
- - - - -	27153	NORTH HENNEPIN COMMUNITY COLLEGE
- - - - -	27155	RAINY RIVER COMMUNITY COLLEGE
- - - - -	27156	NORMANDALE COMMUNITY COLLEGE
- - - - -	27157	INVER HILLS COMMUNITY COLLEGE
- - - - -	83002	CROSIER SEMINARY JUNIOR COLLEGE
- - - - -	84013	NORTH CENTRAL BIBLE COLLEGE
- - - - -	84014	NORTHWESTERN COLLEGE
- - - - -	84015	PILLSBURY COLLEGE
- - - - -	84021	ST. PAUL BIBLE COLLEGE

Engineering technology programs are designed to teach people about the materials and processes used in engineering, and to develop the technical skills necessary to assist and support engineers and other professionals. Most programs are closely related to the engineering specialties, including civil, mechanical, industrial, and electrical engineering. Some programs such as environmental science and water/wastewater technology intend to prepare people for work as treatment plant operators, field inspectors, sanitarians, or pollution control specialists. Individual programs generally provide training in one specialty or in a group of related areas. Engineering technology programs are offered at technical institutions, community colleges, vocational schools, and universities. They range in length from one-year certificate programs to bachelor's degree programs. Some four-year colleges and universities also offer master's degree programs in engineering technologies. Shorter programs emphasize technical training while longer programs provide additional background in engineering theory and general education.

---PROGRAM ADMISSION: A strong background in mathematics and sciences is recommended. English and social science courses are also valuable.

---TYPICAL COURSE WORK: Laboratory experience is usually a major part of the training program. Many programs include courses in the following:

Chemistry	Blueprint Reading and
Calculus	Drawing
Drafting	Computer Science

In addition, students take engineering courses related to their specialty.

---GRADUATION REQUIREMENTS: Requirements vary with the length of program and specialty. See school catalogs for more detailed information.

---THINGS TO KNOW: Many engineering technology programs offer cooperative education opportunities which allow students to work in selected industries. This provides valuable on-the-job experience. In some cases students earn wages while they are training.

---RELATED PROGRAMS: PROG 251 Engineering, 291 Drafting, 288 Construction Trades, 292 Electricity and Electronics Repair, 211 Computer and Information Science.

---DIRECTLY RELATED OCCUPATIONS: DESC 2451 Engineering Technicians, 5946 Water and Sewage Plant Operators, 94882 Sanitarians.

ASSOCIATED OCCUPATIONS: DESC 2411 Engineers.

SCHOOLS:

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT THE ELECTRICAL ENGINEER AND OTHER PROFESSIONALS IN THE DESIGN, DEVELOPMENT, MODIFICATION, AND TESTING OF ELECTRONIC CIRCUITS, DEVICES, AND SYSTEMS. INSTRUCTION IN PRACTICAL CIRCUIT FEASIBILITY; PROTOTYPE DEVELOPMENT AND TESTING; SYSTEMS ANALYSIS, INCLUDING DESIGN, SELECTION, INSTALLATION, CALIBRATION, AND TESTING; SOLID-STATE AND MICROMINIATURE CIRCUITS; AND THE APPLICATION OF ENGINEERING DATA TO

SPECIFIC PROBLEMS IN THE ELECTRONICS FIELD IS INCLUDED. THE 'AUTOMOTIVE DIAGNOSTIC TECHNICIAN' PROGRAM PREPARES TECHNICIANS IN THE DIAGNOSIS, CALIBRATION AND REPAIR OF COMPUTER CONTROLLED AND ELECTRONIC DEVICES IN AUTOMOBILES. THE PROGRAM INCLUDES INSTRUCTION IN THE ELECTRONIC AND COMPUTER CONTROLLED IGNITION, CARBURETOR, FUEL METERING AND EMISSION CONTROL SYSTEMS. TESTING FOR DIAGNOSTIC PURPOSES WILL BE ACCOMPLISHED WITH VOLT-OHM-METERS, COMPUTER CONTROLLED MULTI-USE METERS AND SCOPES, DYNOMO-METERS AND MULTI-GAS ANALYSERS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE ELECTRONICS PROGRAM IS 19 MONTHS LONG AND THE AUTOMOTIVE PROGRAM IS 9 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS, SAFETY GLASSES, AND TOOLS.

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT THE ELECTRICAL ENGINEER AND OTHER PROFESSIONALS IN THE DESIGN, DEVELOPMENT, MODIFICATION, AND TESTING OF ELECTRONIC CIRCUITS, DEVICES, AND SYSTEMS. INSTRUCTION IN PRACTICAL CIRCUIT FEASIBILITY; PROTOTYPE DEVELOPMENT AND TESTING; SYSTEMS ANALYSIS, INCLUDING DESIGN, SELECTION, INSTALLATION, CALIBRATION, AND TESTING; SOLID-STATE AND MICROMINIATURE CIRCUITS; AND THE APPLICATION OF ENGINEERING DATA TO SPECIFIC PROBLEMS IN THE ELECTRONICS FIELD IS INCLUDED.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED IN THIS PROGRAM.

--- LENGTH OF PROGRAM: THIS PROGRAM IS A TWO YEAR PROGRAM.

- - - - - 25004 AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT THE ELECTRICAL ENGINEER AND OTHER PROFESSIONALS IN THE DESIGN, DEVELOPMENT, MODIFICATION, AND TESTING OF ELECTRONIC CIRCUITS, DEVICES, AND SYSTEMS. INSTRUCTION IN PRACTICAL CIRCUIT FEASIBILITY; PROTOTYPE DEVELOPMENT AND TESTING; SYSTEMS ANALYSIS, INCLUDING DESIGN, SELECTION, INSTALLATION, CALIBRATION, AND TESTING; SOLID-STATE AND MICROMINIATURE CIRCUITS; AND THE APPLICATION OF ENGINEERING DATA TO SPECIFIC PROBLEMS IN THE ELECTRONICS FIELD IS INCLUDED.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY AND A TRADE CERTIFICATE IN AN ELECTRONICS TECHNOLOGY ARE OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR ELECTRONICS 1 WILL INCLUDE: \$120 FOR TOOLS, \$180 FOR BOOKS AND SUPPLIES, \$5 FOR SAFETY EQUIPMENT, AND A \$100 MISCELLANEOUS CHARGE. FOR ELECTRONICS 2 THEY WILL INCLUDE: \$15 FOR TOOLS AND \$85 FOR BOOKS AND SUPPLIES.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'TELEPHONE SERVICE TECHNOLOGY' PROGRAM IS A NEW OR REVISED PROGRAM FOR WHICH THERE WAS NO AVAILABLE DESCRIPTION AT THE UPDATE OF THIS EDITION OF MCIS. PLEASE CONTACT THE AVTI FOR INFORMATION ON THIS PROGRAM.

--- DEGREES OFFERED: A CERTIFICATE AND A DEGREE OF OCCUPATIONAL PROFICIENCY ARE OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 11 MONTHS LONG.

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CIVIL/HIGHWAY TECHNICIAN OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO ASSIST A CIVIL ENGINEER IN DESIGNING,

SURVEYING, CONTROLLING MATERIALS, TESTING, AND BUILDING OF VARIOUS STRUCTURES. INSTRUCTION IN THE PHYSICAL SCIENCES, MATHEMATICS, SURVEYING, LAYING OUT ROADWAYS, PREPARING PLANS AND SPECIFICATIONS FOR THE CONSTRUCTION OF HIGHWAYS, RAILROADS, BUILDINGS, DAMS, AND AIRPORTS, STRUCTURAL DETAILING AND DESIGN TESTING, CONSTRUCTION ESTIMATING, AND OPERATIONS MANAGEMENT IS INCLUDED.

THE 'ELECTRONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT THE ELECTRICAL ENGINEER AND OTHER PROFESSIONALS IN THE DESIGN, DEVELOPMENT, MODIFICATION, AND TESTING OF ELECTRONIC CIRCUITS, DEVICES, AND SYSTEMS. INSTRUCTION IN PRACTICAL CIRCUIT FEASIBILITY, PROTOTYPE DEVELOPMENT AND TESTING; SYSTEMS ANALYSIS, INCLUDING DESIGN, SELECTION, INSTALLATION, CALIBRATION, AND TESTING; SOLID-STATE AND MICROMINIATURE CIRCUITS; AND THE APPLICATION OF ENGINEERING DATA TO SPECIFIC PROBLEMS IN THE ELECTRONICS FIELD IS INCLUDED.

--- DEGREES OFFERED: A CERTIFICATE OR DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE CIVIL/HIGHWAY PROGRAM IS 76 WEEKS LONG. THE ELECTRONICS PROGRAM IS 92 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$180 FOR BOOKS, SUPPLIES AND EQUIPMENT FOR THE CIVIL/HIGHWAY ENGINEERING TECHNICIANS, AND \$150 FOR ELECTRONICS.

- - - - - 25012 FARIBAULT AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT THE ELECTRICAL ENGINEER AND OTHER PROFESSIONALS IN THE DESIGN, DEVELOPMENT, MODIFICATION, AND TESTING OF ELECTRONIC CIRCUITS, DEVICES, AND SYSTEMS. INSTRUCTION IN PRACTICAL CIRCUIT FEASIBILITY; PROTOTYPE DEVELOPMENT AND TESTING; SYSTEMS ANALYSIS, INCLUDING DESIGN, SELECTION, INSTALLATION, CALIBRATION, AND TESTING; SOLID-STATE AND MICROMINIATURE CIRCUITS; AND THE APPLICATION OF ENGINEERING DATA TO SPECIFIC PROBLEMS IN THE ELECTRONICS FIELD IS INCLUDED.

--- LENGTH OF PROGRAM: THIS IS AN ELEVEN MONTH PROGRAM.

- - - - - 25013 GRANITE FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT THE ELECTRICAL ENGINEER AND OTHER PROFESSIONALS IN THE DESIGN, DEVELOPMENT, MODIFICATION, AND TESTING OF ELECTRONIC CIRCUITS, DEVICES, AND SYSTEMS. INSTRUCTION IN PRACTICAL CIRCUIT FEASIBILITY; PROTOTYPE DEVELOPMENT AND TESTING; SYSTEMS ANALYSIS, INCLUDING DESIGN, SELECTION, INSTALLATION, CALIBRATION, AND TESTING; SOLID-STATE AND MICROMINIATURE CIRCUITS; AND THE APPLICATION OF ENGINEERING DATA TO SPECIFIC PROBLEMS IN THE ELECTRONICS FIELD IS INCLUDED.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION AND A DIPLOMA ARE OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 19 MONTHS LONG.

- - - - - 25014 HIBBING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT THE ELECTRICAL ENGINEER AND OTHER PROFESSIONALS IN THE DESIGN, DEVELOPMENT, MODIFICATION, AND TESTING OF ELECTRONIC CIRCUITS, DEVICES, AND SYSTEMS. INSTRUCTION IN PRACTICAL CIRCUIT FEASIBILITY; PROTOTYPE DEVELOPMENT AND TESTING; SYSTEMS ANALYSIS, INCLUDING DESIGN, SELECTION, INSTALLATION, CALIBRATION, AND TESTING; SOLID-STATE AND MICROMINIATURE CIRCUITS; AND THE APPLICATION OF ENGINEERING DATA TO SPECIFIC PROBLEMS IN THE ELECTRONICS FIELD IS INCLUDED.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.
--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$125 FOR BOOKS, SUPPLIES, EQUIPMENT AND OTHER COSTS.

- - - - - 25015 HUTCHINSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'NON-DESTRUCTIVE TESTING TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO INSPECT AND MONITOR THE QUALITY OF METALLIC PRODUCTION MATERIALS AND RAW MATERIALS THROUGH THE USE OF METHODS THAT DO NOT DESTROY THE VALUE OF THE PRODUCT. INSTRUCTION INCLUDES PROCEDURES AND METHODS THAT USE MAGNAFLUP, X-RAY EDDY CURRENT, ULTRASONIC TESTING, AND OTHER METHODS COMMON TO THE FIELD OF NON-DESTRUCTIVE TESTING.

--- DEGREES OFFERED: GRADUATES COMPLETING ALL REQUIRED COMPETENCIES WILL RECEIVE A 2 YEAR TECHNICAL DEGREE IN NON-DESTRUCTIVE TESTING.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 62 TO 79 WEEKS LONG.

--- SPECIAL COSTS: NON-DESTRUCTIVE TESTING COSTS INCLUDE \$500 FOR SUPPLIES, SAFETY EQUIPMENT, BOOKS AND PROGRAM FEES. SECOND YEAR COSTS ARE \$275.

- - - - - 25016 JACKSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT THE ELECTRICAL ENGINEER AND OTHER PROFESSIONALS IN THE DESIGN, DEVELOPMENT, MODIFICATION, AND TESTING OF ELECTRONIC CIRCUITS, DEVICES, AND SYSTEMS. INSTRUCTION IN PRACTICAL CIRCUIT FEASIBILITY; PROTOTYPE DEVELOPMENT AND TESTING; SYSTEMS ANALYSIS, INCLUDING DESIGN, SELECTION, INSTALLATION, CALIBRATION, AND TESTING; SOLID-STATE AND MICROMINIATURE CIRCUITS; AND THE APPLICATION OF ENGINEERING DATA TO SPECIFIC PROBLEMS IN THE ELECTRONICS FIELD IS INCLUDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 22 MONTHS LONG.

- - - - - 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CIVIL/HIGHWAY TECHNICIAN OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO ASSIST A CIVIL ENGINEER IN DESIGNING, SURVEYING, CONTROLLING MATERIALS, TESTING, AND BUILDING OF VARIOUS STRUCTURES. INSTRUCTION IN THE PHYSICAL SCIENCES, MATHEMATICS, SURVEYING, LAYING OUT ROADWAYS, PREPARING PLANS AND SPECIFICATIONS FOR THE CONSTRUCTION OF HIGHWAYS, RAILROADS, BUILDINGS, DAMS, AND AIRPORTS, STRUCTURAL DETAILING AND DESIGN TESTING, CONSTRUCTION ESTIMATING, AND OPERATIONS MANAGEMENT IS INCLUDED.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS OFFERED.

--- LENGTH OF PROGRAM: CIVIL/HIGHWAY TECHNOLOGY IS A 42 WEEK PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR BOOKS AND SUPPLIES ARE \$220.

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT THE ELECTRICAL ENGINEER AND OTHER PROFESSIONALS IN THE DESIGN, DEVELOPMENT, MODIFICATION, AND TESTING OF ELECTRONIC CIRCUITS, DEVICES, AND SYSTEMS. INSTRUCTION IN PRACTICAL CIRCUIT FEASIBILITY; PROTOTYPE DEVELOPMENT AND TESTING; SYSTEMS ANALYSIS, INCLUDING DESIGN, SELECTION, INSTALLATION, CALIBRATION, AND TESTING; SOLID-STATE AND MICROMINIATURE CIRCUITS; AND THE APPLICATION OF ENGINEERING DATA TO SPECIFIC PROBLEMS IN THE ELECTRONICS FIELD IS INCLUDED.

--- LENGTH OF PROGRAM: THIS IS A 21 MONTH PROGRAM.

- - - - - 25019 MOORHEAD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT THE ELECTRICAL ENGINEER AND OTHER

PROFESSIONALS IN THE DESIGN, DEVELOPMENT, MODIFICATION, AND TESTING OF ELECTRONIC CIRCUITS, DEVICES, AND SYSTEMS. INSTRUCTION IN PRACTICAL CIRCUIT FEASIBILITY; PROTOTYPE DEVELOPMENT AND TESTING; SYSTEMS ANALYSIS, INCLUDING DESIGN, SELECTION, INSTALLATION, CALIBRATION, AND TESTING; SOLID-STATE AND MICROMINIATURE CIRCUITS; AND THE APPLICATION OF ENGINEERING DATA TO SPECIFIC PROBLEMS IN THE ELECTRONICS FIELD IS INCLUDED.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THIS IS A 20 MONTH PROGRAM.

--- 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRO-MECHANICAL TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO ASSIST MECHANICAL AND ELECTRICAL ENGINEERS AND OTHER MANAGERS IN THE DESIGN, DEVELOPMENT, AND TESTING OF ELECTROMECHANICAL DEVICES AND SYSTEMS SUCH AS PLANT AUTOMATION, AUTOMATED CONTROL SYSTEMS, SERVOMECHANISMS, VENDING MACHINES, ELEVATOR CONTROLS, MISSILE CONTROLS, TAPE-CONTROL MACHINES, AND AUXILIARY COMPUTER EQUIPMENT. INSTRUCTION INCLUDES ASSISTING WITH FEASIBILITY TESTING OF ENGINEERING CONCEPTS; SYSTEMS ANALYSIS (INCLUDING DESIGN, SELECTION, TESTING, AND APPLICATION OF ENGINEERING DATA); AND THE PREPARATION OF WRITTEN REPORTS AND TEST RESULTS. THE 'INDUSTRIAL ENGINEERING TECHNICIAN OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO ASSIST AN INDUSTRIAL ENGINEER IN PRODUCTION AND PLANNING; DESIGN AND INSTALLATION OF INTEGRATED SYSTEMS OF MATERIALS, EQUIPMENT, AND PERSONNEL; AND MEASUREMENT, TESTING AND MANAGEMENT OF QUALITY CONTROL IN THE MANUFACTURING, TRANSPORTATION, ASSEMBLY, INSTALLATION, AND OPERATING OF TESTING EQUIPMENT (DESTRUCTIVE AND NONDESTRUCTIVE); MEASURING DEVICES, SPECIFICATION READING, AND DESIGN AND MEASUREMENT FOR LEVELS OF TOLERANCE COMPATIBLE WITH OVERALL PRODUCTION SPECIFICATIONS.

THE 'QUALITY CONTROL TECHNICIAN OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO SUPPORT ENGINEERS OR MANAGERS BY UTILIZING THE SCIENCES OF MEASUREMENT AND QUALITY CONTROL, QUALITY DESIGN, PRODUCTION AND INSPECTION, TESTING (BOTH DESTRUCTIVE AND NONDESTRUCTIVE), STATISTICAL SAMPLING, AND MATHEMATICAL PROBABILITY AS IT RELATES TO QUALITY CONTROL IN MASS PRODUCED ITEMS MANUFACTURED BY MODERN PRODUCTION PROCEDURES AND PROCESSES. INSTRUCTION INCLUDES THE INTENSIVE STUDY OF THE PHYSICAL AND RELATED ENGINEERING SCIENCES AND SUPPORTING MATHEMATICS RELATED TO MATERIAL TESTING DEVICES; TESTING; INSPECTION TECHNIQUES; ORGANIZATION OF SYSTEMS OF QUALITY CONTROL; STATISTICAL SAMPLING; MANAGEMENT OF QUALITY IN MANUFACTURING, TRANSPORTATION, ASSEMBLY, INSTALLATION, AND OPERATION; ASSURANCES OF MAXIMUM ACCURACY OR QUALITY CONTROL IN ALL PHASES OR SYSTEMS. SPECIAL STUDY IS REQUIRED TO UNDERSTAND THE OPERATION OF TESTING EQUIPMENT (PARTICULARLY NONDESTRUCTIVE EQUIPMENT), MEASURING DEVICES, READING OF SPECIFICATIONS, DESIGN AND MEASURING OF TOLERANCES TO ASSURE THAT A CERTAIN LEVEL OF QUALITY WILL BE MET IN PRODUCING A COMPONENT, UNIT, OR SYSTEM. INSTRUCTION INCLUDES THE PREPARATION OF SCIENTIFIC OR TECHNICAL REPORTS AND THE DEVELOPMENT OF INTERPERSONAL SKILLS REQUIRED FOR THE PERFORMANCES OF TASKS OR THE SUPERVISION OF THE WORK OF OTHERS.

--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED TO STUDENTS WHO SUCCESSFULLY COMPLETE EACH PROGRAM.

--- LENGTH OF PROGRAM: THE ELECTRO-MECHANICAL TECHNOLOGY PROGRAM IS 24 MONTHS LONG. THE INDUSTRIAL ENGINEERING TECHNICIAN AND THE QUALITY CONTROL TECHNOLOGY PROGRAMS ARE 23 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$350 FOR THE ELECTRO-MECHANICAL PROGRAM AND \$204 FOR INDUSTRIAL ENGINEERING AND \$340 FOR QUALITY CONTROL TECHNICIAN FOR BOOKS, SUPPLIES AND EQUIPMENT.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT THE ELECTRICAL ENGINEER AND OTHER PROFESSIONALS IN THE DESIGN, DEVELOPMENT, MODIFICATION, AND TESTING OF ELECTRONIC CIRCUITS, DEVICES, AND SYSTEMS. INSTRUCTION IN PRACTICAL CIRCUIT FEASIBILITY; PROTOTYPE DEVELOPMENT AND TESTING; SYSTEMS ANALYSIS, INCLUDING DESIGN, SELECTION, INSTALLATION, CALIBRATION, AND TESTING; SOLID-STATE AND MICROMINIATURE CIRCUITS; AND THE APPLICATION OF ENGINEERING DATA TO SPECIFIC PROBLEMS IN THE ELECTRONICS FIELD IS INCLUDED.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED TO STUDENTS WHO SUCCESSFULLY COMPLETE THIS PROGRAM.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES 18 MONTHS TO COMPLETE.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CIVIL/HIGHWAY TECHNICIAN OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO ASSIST A CIVIL ENGINEER IN DESIGNING, SURVEYING, CONTROLLING MATERIALS, TESTING, AND BUILDING OF VARIOUS STRUCTURES. INSTRUCTION IN THE PHYSICAL SCIENCES, MATHEMATICS, SURVEYING, LAYING OUT ROADWAYS, PREPARING PLANS AND SPECIFICATIONS FOR THE CONSTRUCTION OF HIGHWAYS, RAILROADS, BUILDINGS, DAMS, AND AIRPORTS, STRUCTURAL DETAILING AND DESIGN TESTING, CONSTRUCTION ESTIMATING, AND OPERATIONS MANAGEMENT IS INCLUDED.

THE 'ELECTRONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT THE ELECTRICAL ENGINEER AND OTHER PROFESSIONALS IN THE DESIGN, DEVELOPMENT, MODIFICATION, AND TESTING OF ELECTRONIC CIRCUITS, DEVICES, AND SYSTEMS. INSTRUCTION IN PRACTICAL CIRCUIT FEASIBILITY; PROTOTYPE DEVELOPMENT AND TESTING; SYSTEMS ANALYSIS, INCLUDING DESIGN, SELECTION, INSTALLATION, CALIBRATION, AND TESTING; SOLID-STATE AND MICROMINIATURE CIRCUITS; AND THE APPLICATION OF ENGINEERING DATA TO SPECIFIC PROBLEMS IN THE ELECTRONICS FIELD IS INCLUDED.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS ARE \$430 FOR THE FIRST YEAR AND \$110 FOR THE SECOND IN CIVIL/HIGHWAY TECHNICIAN. BOOKS AND SUPPLIES ARE INCLUDED IN THE COSTS. THE COSTS FOR THE ELECTRONICS PROGRAM INCLUDE \$250 FOR BOOKS AND SUPPLIES.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CIVIL/HIGHWAY TECHNICIAN OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO ASSIST A CIVIL ENGINEER IN DESIGNING, SURVEYING, CONTROLLING MATERIALS, TESTING, AND BUILDING OF VARIOUS STRUCTURES. INSTRUCTION IN THE PHYSICAL SCIENCES, MATHEMATICS, SURVEYING, LAYING OUT ROADWAYS, PREPARING PLANS AND SPECIFICATIONS FOR THE CONSTRUCTION OF HIGHWAYS, RAILROADS, BUILDINGS, DAMS, AND AIRPORTS, STRUCTURAL DETAILING AND DESIGN TESTING, CONSTRUCTION ESTIMATING, AND OPERATIONS MANAGEMENT IS INCLUDED.

THE 'ELECTRO-MECHANICAL TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO ASSIST MECHANICAL AND ELECTRICAL ENGINEERS AND OTHER MANAGERS IN THE DESIGN, DEVELOPMENT, AND TESTING OF ELECTROMECHANICAL DEVICES AND SYSTEMS SUCH AS PLANT AUTOMATION, AUTOMATED CONTROL SYSTEMS, SERVOMECHANISMS, VENDING MACHINES, ELEVATOR CONTROLS, MISSILE CONTROLS, TAPE-CONTROL MACHINES, AND AUXILIARY COMPUTER EQUIPMENT. INSTRUCTION INCLUDES ASSISTING WITH FEASIBILITY TEST-ING OF ENGINEERING CONCEPTS; SYSTEMS ANALYSIS INCLUDING DESIGN, SELECTION, TESTING, AND APPLICATION OF ENGINEERING DATA); AND THE PREPARATION OF WRITTEN REPORTS AND TEST RESULTS.

THE 'ELECTRONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT THE ELECTRICAL ENGINEER AND OTHER PROFESSIONALS IN THE DESIGN, DEVELOPMENT, MODIFICATION, AND TESTING OF ELECTRONIC CIRCUITS, DEVICES, AND SYSTEMS. INSTRUCTION IN PRACTICAL CIRCUIT FEASIBILITY; PROTOTYPE DEVELOPMENT AND TESTING; SYSTEMS ANALYSIS, INCLUDING DESIGN, SELECTION, INSTALLATION, CALIBRATION, AND TESTING; SOLID-STATE AND MICROMINIATURE CIRCUITS; AND THE APPLICATION OF ENGINEERING DATA TO SPECIFIC PROBLEMS IN THE ELECTRONICS FIELD IS INCLUDED.

THE 'ARCHITECTURAL AND ENGINEERING TECHNOLOGY' PROGRAM IS A NEW OR REVISED PROGRAM FOR WHICH THERE WAS NO AVAILABLE DESCRIPTION AT THE UPDATE OF THIS EDITION OF MCIS. PLEASE CONTACT THE AVTI FOR INFORMATION ON THIS PROGRAM.

--- DEGREES OFFERED: DIPLOMAS ARE AWARDED.

--- LENGTH OF PROGRAM: THE CIVIL/HIGHWAY TECHNOLOGY PROGRAM IS 24 MONTHS LONG. ON-THE-JOB TRAINING IS PART OF THIS PROGRAM. THE ELECTRO-MECHANICAL TECHNOLOGY PROGRAM IS 11 MONTHS LONG. THE ELECTRONICS TECHNOLOGY PROGRAM AND THE ARCHITECTURAL AND ENGINEERING PROGRAMS ARE 18 MONTHS LONG.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'SURVEYING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO TECHNICALLY ASSIST CIVIL ENGINEERS AND URBAN PLANNERS IN THE DETERMINATION AND DESCRIPTION OF THE SHAPE, CONTOUR, LOCATION, AND DIMENSIONS OF GEOGRAPHIC AREAS. INSTRUCTION IN THE USE OF SURVEYING INSTRUMENTS SUCH AS TRANSITS, THE IDENTIFICATION OF ELEVATIONS, CONTOUR MAPPING AND THE ABILITY TO ESTABLISH BOUNDARY LINES FOR PROPERTY IDENTIFICATION PURPOSES IS INCLUDED.

THE 'ELECTRONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT THE ELECTRICAL ENGINEER AND OTHER PROFESSIONALS IN THE DESIGN, DEVELOPMENT, MODIFICATION, AND TESTING OF ELECTRONIC CIRCUITS, DEVICES, AND SYSTEMS. INSTRUCTION IN PRACTICAL CIRCUIT FEASIBILITY; PROTOTYPE DEVELOPMENT AND TESTING; SYSTEMS ANALYSIS, INCLUDING DESIGN, SELECTION, INSTALLATION, CALIBRATION, AND TESTING; SOLID-STATE AND MICROMINIATURE CIRCUITS; AND THE APPLICATION OF ENGINEERING DATA TO SPECIFIC PROBLEMS IN THE ELECTRONICS FIELD IS INCLUDED.

--- DEGREES OFFERED: A DIPLOMA OF RECOGNITION OR CERTIFICATE OF COMPLETION IS OFFERED.

--- LENGTH OF PROGRAM: THE SURVEYING PROGRAM IS 12 TO 22 MONTHS LONG. THE ELECTRONICS TECHNOLOGY PROGRAM IS 22 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$240 FOR BOOKS AND SUPPLIES FOR SURVEYING, AND \$250 FOR ELECTRONICS TECHNOLOGY.

- - - - - 25028 THIEF RIVER FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT THE ELECTRICAL ENGINEER AND OTHER PROFESSIONALS IN THE DESIGN, DEVELOPMENT, MODIFICATION, AND TESTING OF ELECTRONIC CIRCUITS, DEVICES, AND SYSTEMS. INSTRUCTION IN PRACTICAL CIRCUIT FEASIBILITY; PROTOTYPE DEVELOPMENT AND TESTING; SYSTEMS ANALYSIS, INCLUDING DESIGN, SELECTION, INSTALLATION, CALIBRATION, AND TESTING; SOLID-STATE AND MICROMINIATURE CIRCUITS; AND THE APPLICATION OF ENGINEERING DATA TO SPECIFIC PROBLEMS IN THE ELECTRONICS FIELD IS INCLUDED.

--- DEGREES OFFERED: DEGREES OF OCCUPATIONAL PROFICIENCY ARE AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM LASTS 20 MONTHS.

- - - - - 25029 WADENA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CIVIL/HIGHWAY TECHNICIAN OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO ASSIST A CIVIL ENGINEER IN DESIGNING,

SURVEYING, CONTROLLING MATERIALS, TESTING, AND BUILDING OF VARIOUS STRUCTURES. INSTRUCTION IN THE PHYSICAL SCIENCES, MATHEMATICS, SURVEYING, LAYING OUT ROADWAYS, PREPARING PLANS AND SPECIFICATIONS FOR THE CONSTRUCTION OF HIGHWAYS, RAILROADS, BUILDINGS, DAMS, AND AIRPORTS, STRUCTURAL DETAILING AND DESIGN TESTING, CONSTRUCTION ESTIMATING, AND OPERATIONS MANAGEMENT IS INCLUDED.

THE 'ELECTRONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT THE ELECTRICAL ENGINEER AND OTHER PROFESSIONALS IN THE DESIGN, DEVELOPMENT, MODIFICATION, AND TESTING OF ELECTRONIC CIRCUITS, DEVICES, AND SYSTEMS. INSTRUCTION IN PRACTICAL CIRCUIT FEASIBILITY; PROTOTYPE DEVELOPMENT AND TESTING; SYSTEMS ANALYSIS, INCLUDING DESIGN, SELECTION, INSTALLATION, CALIBRATION, AND TEST-ING; SOLID-STATE AND MICROMINIATURE CIRCUITS; AND THE APPLICATION OF ENGINEERING DATA TO SPECIFIC PROBLEMS IN THE ELECTRONICS FIELD IS INCLUDED.

THE 'TELEPHONE SERVICE TECHNOLOGY' PROGRAM IS A NEW OR REVISED PROGRAM FOR WHICH THERE WAS NO AVAILABLE DESCRIPTION AT THE UPDATE OF THIS EDITION OF MCIS. PLEASE CONTACT THE AVTI FOR INFORMATION ON THIS PROGRAM.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: CIVIL/HIGHWAY TECHNICIAN PROGRAM IS 11 MONTHS LONG. THE ELECTRONICS TECHNOLOGY PROGRAM IS 19 MONTHS LONG AND THE TELEPHONE SERVICE TECHNOLOGY PROGRAM IS 11 OR 20 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$220 FOR BOOKS, SUPPLIES AND TOOLS FOR CIVIL/HIGHWAY ENGINEERING, \$405 FOR ELECTRONICS TECHNOLOGY, AND \$625 FOR TELEPHONE SERVICE TECHNOLOGY.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT THE ELECTRICAL ENGINEER AND OTHER PROFESSIONALS IN THE DESIGN, DEVELOPMENT, MODIFICATION, AND TESTING OF ELECTRONIC CIRCUITS, DEVICES, AND SYSTEMS. INSTRUCTION IN PRACTICAL CIRCUIT FEASIBILITY; PROTOTYPE DEVELOPMENT AND TESTING; SYSTEMS ANALYSIS, INCLUDING DESIGN, SELECTION, INSTALLATION, CALIBRATION, AND TESTING; SOLID-STATE AND MICROMINIATURE CIRCUITS; AND THE APPLICATION OF ENGINEERING DATA TO SPECIFIC PROBLEMS IN THE ELECTRONICS FIELD IS INCLUDED.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OR A CERTIFICATE IS AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE ABOUT \$300 FOR BOOKS (ALL USABLE BOOKS ARE BOUGHT BACK AT 70 PERCENT OF PAID PRICE) AND \$150 FOR TOOLS.

- - - - - 25033 RED WING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'INDUSTRIAL ENGINEERING TECHNICIAN OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO ASSIST AN INDUSTRIAL ENGINEER IN PRODUCTION AND PLANNING; DESIGN AND INSTALLATION OF INTEGRATED SYSTEMS OF MATERIALS, EQUIPMENT, AND PERSONNEL; AND MEASUREMENT, TESTING AND MANAGEMENT OF QUALITY CONTROL IN THE MANUFACTURING, TRANSPORTATION, ASSEMBLY, INSTALLATION, AND OPERATING OF TESTING EQUIPMENT (DESTRUCTIVE AND NON-DESTRUCTIVE); MEASURING DEVICES, SPECIFICATION READING, AND DESIGN AND MEASUREMENT FOR LEVELS OF TOLERANCE COMPATIBLE WITH OVERALL PRODUCTION SPECIFICATIONS.

--- DEGREES OFFERED: DEGREES OF OCCUPATIONAL PROFICIENCY ARE AWARDED TO GRADUATES OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE ABOUT \$225 FOR INDUSTRIAL TECHNOLOGY.

- - - - - 26071 MANKATO STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRONICS ENGINEERING TECHNOLOGY' PROGRAM PREPARES STUDENTS WHO WISH TO BE EMPLOYED IN INDUSTRY AS PART OF AN ENGINEERING TEAM APPLYING TECHNICAL SKILLS IN SUPPORT OF ENGINEERING ACTIVITIES. TOTAL CREDITS EQUAL 113. 'INDUSTRIAL TECHNOLOGY' IS ONE OF THE ALLIED ENGINEERING PROFESSIONS, AND THE PROGRAM PREPARES INDIVIDUALS IN THE AREAS OF TECHNICAL MANAGEMENT, PRODUCTION SUPERVISION, AND RELATED TYPES OF LEADERSHIP POSITIONS. CAREER OPTIONS INCLUDE, BUT ARE NOT LIMITED TO: QUALITY CONTROL ANALYSIS, PRODUCTION METHODS ANALYSIS, PRODUCTION SUPERVISION. THE MASTER OF SCIENCE PROGRAM IN 'INDUSTRIAL/TECHNICAL STUDIES' CONSISTS OF EITHER 45 OR 51 CREDITS AND IS DESIGNED TO AID TEACHERS SEEKING ADDITIONAL KNOWLEDGE AND SKILL IN THEIR AREA OF INDUSTRIAL OR TECHNICAL SPECIALIZATION. STUDENTS COMPLETE COURSES IN INDUSTRIAL/TECHNICAL STUDIES, PROFESSIONAL EDUCATION AND GENERAL EDUCATION ELECTIVES.

--- DEGREES OFFERED: A BACHELOR OF SCIENCE DEGREE IS OFFERED IN ELECTRONICS ENGINEERING TECHNOLOGY TRACK. A BACHELOR OF SCIENCE AND A MASTER OF SCIENCE DEGREE IN INDUSTRIAL TECHNOLOGY ARE OFFERED.

- - - - - 26072 MOORHEAD STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: AN 'INDUSTRIAL EDUCATION' NON-TEACHING BACHELOR OF SCIENCE MAJOR CONSISTS OF 68 CREDITS IN AN INDIVIDUALIZED, BALANCED INDUSTRIAL BACKGROUND. CORE REQUIREMENTS INCLUDE COURSES FROM CONSTRUCTION/COMMUNICATION/MANUFACTURING AND POWER. AN EMPHASIS AREA IN ONE OR MORE TECHNOLOGICAL AREAS IS REQUIRED.

--- DEGREES OFFERED: A BACHELOR OF SCIENCE DEGREE IS OFFERED IN THE FIELD OF INDUSTRIAL EDUCATION.

- - - - - 26073 ST. CLOUD STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: 'ENGINEERING TECHNOLOGY' PROGRAMS PREPARE INDIVIDUALS FOR PROFESSIONAL AND SEMI-PROFESSIONAL POSITIONS IN INDUSTRY. AREAS OF STUDY INCLUDE: INDUSTRIAL ENGINEERING, ENGINEERING TECHNOLOGY, MANUFACTURING ENGINEERING, PHOTOGRAPHIC ENGINEERING TECHNOLOGY, ELECTRONICS ENGINEERING TECHNOLOGY, AVIATION, AND MECHANICAL ENGINEERING TECHNOLOGY.

--- DEGREES OFFERED: ASSOCIATE IN SCIENCE DEGREES ARE OFFERED IN ELECTRONICS, MECHANICAL, OR PHOTOGRAPHIC ENGINEERING TECHNOLOGY AND BACHELOR OF SCIENCE DEGREES ARE OFFERED IN ENGINEERING TECHNOLOGY, MANUFACTURING ENGINEERING, AND PHOTOGRAPHIC ENGINEERING TECHNOLOGY, PHOTOGRAPHIC SCIENCE AND INSTRUMENTATION.

- - - - - 26175 SOUTHWEST STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE TWO YEAR 'MECHANICAL ENGINEERING TECHNOLOGY' PROGRAM PREPARES GRADUATES TO WORK AS AN ENGINEERING TECHNICIAN OR TO CONTINUE THEIR EDUCATION TOWARD A BACHELOR OF ENGINEERING TECHNOLOGY DEGREE. A TOTAL OF 82 CREDITS IN ENGINEERING TECHNOLOGY RELATED COURSEWORK IS REQUIRED.

A BACHELOR OF ENGINEERING TECHNOLOGY IN 'MECHANICAL TECHNOLOGY' MAY BE EARNED BY A STUDENT WHO COMPLETES THE COURSES REQUIRED FOR A TWO YEAR ASSOCIATE DEGREE AND INCREASES THIS BACKGROUND BY UPPER DIVISION TECHNOLOGY AND NON-TECHNOLOGY COURSE WORK. A TOTAL OF 113 CREDITS IN ENGINEERING TECHNOLOGY COURSEWORK IS REQUIRED. THE TWO YEAR 'ELECTRONIC ENGINEERING TECHNOLOGY' PROGRAM PREPARES GRADUATES TO WORK AS AN ENGINEERING TECHNICIAN OR TO CONTINUE THEIR EDUCATION TOWARD A BACHELOR OF ENGINEERING TECHNOLOGY DEGREE. A TOTAL OF 78 CREDITS IN ENGINEERING TECHNOLOGY RELATED COURSEWORK IS REQUIRED.

A BACHELOR OF ENGINEERING TECHNOLOGY IN 'ELECTRONICS TECHNOLOGY' MAY BE

EARNED BY A STUDENT WHO COMPLETES THE COURSES REQUIRED FOR A TWO YEAR ASSOCIATE DEGREE AND INCREASES THIS BACKGROUND BY UPPER DIVISION TECHNOLOGY AND NON-TECHNOLOGY COURSE WORK. A TOTAL OF 106-109 CREDITS IN ENGINEERING TECHNOLOGY RELATED COURSEWORK IS REQUIRED.

--- DEGREES OFFERED: ASSOCIATE OF ENGINEERING TECHNOLOGY AND ELECTRONIC ENGINEERING TECHNOLOGY AND BACHELOR OF ENGINEERING TECHNOLOGY DEGREES IN ELECTRONICS AND MECHANICAL ENGINEERING TECHNOLOGY ARE OFFERED.

- - - - - 27147 VERMILION COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'WATER AND WASTEWATER TECHNOLOGY' PROGRAM TRAINS STUDENTS AS TECHNICIANS TO WORK IN AREAS RELATED TO ENVIRONMENTAL PROTECTION AND PUBLIC HEALTH. TWO PROGRAM OPTIONS ARE AVAILABLE: HYDROLOGY AND WASTE WATER TECHNOLOGY. STUDENTS MAY FIND EMPLOYMENT IN PUBLIC HEALTH, ENGINEERING, POLLUTION CONTROL, AND TREATMENT PLANTS. THE 'ENVIRONMENTAL ANALYSIS TECHNOLOGY' PROGRAM TRAINS STUDENTS FOR TECHNICAL PARAPROFESSIONAL CAREERS IN BOTH LAND AND WATER ECOLOGICAL STUDIES IN ADDITION TO A BACKGROUND IN AIR QUALITY AND NOISE MONITORING. TWO PROGRAM OPTIONS ARE AVAILABLE: BIOLOGICAL EMPHASIS AND PHYSICAL EMPHASIS.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: BOTH PROGRAMS ARE 2 YEARS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE BOOKS AND MATERIALS.

- - - - - 27148 ROCHESTER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'CIVIL ENGINEERING TECHNOLOGY' PROGRAM PREPARES STUDENTS FOR CAREERS AS TECHNICIANS WHO WORK WITH CIVIL ENGINEERS DOING DETAILED DESIGN WORK, TESTING MATERIALS, SURVEYING, AND OTHER FUNCTIONS. THE 'ELECTRONICS ENGINEERING TECHNOLOGY' PROGRAM PREPARES STUDENTS FOR TECHNICIAN JOBS WORKING DIRECTLY WITH DESIGN, TEST, DEVELOPMENT, AND RESEARCH IN THE MODERN INDUSTRIAL WORLD. GRADUATES WILL BECOME CERTIFIED BY THE ACCREDITATION BOARD FOR ENGINEERING AND TECHNOLOGY (ABET).

--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE CIVIL ENGINEERING TECHNOLOGY AND ELECTRONICS ENGINEERING TECHNOLOGY PROGRAMS ARE BOTH 2 YEARS LONG.

- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE "ELECTRONIC ENGINEERING TECHNOLOGY" PROGRAM PREPARES STUDENTS TO WORK IN A NUMBER OF FIELDS. THEY MAY ENTER TECHNICAL CAREERS IN COMMUNICATIONS, CONTROL SYSTEMS, COMPUTER DESIGN, COMPUTER APPLICATIONS, LOGIC SYSTEMS, CIRCUIT DESIGN, SYSTEM TESTING, AND MEASUREMENT TECHNIQUES.

--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 2-3 YEARS LONG AND IS PRESENTLY OFFERED EXCLUSIVELY DURING EVENING HOURS.

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE MINNESOTA SOCIETY OF ARCHITECTS HAS DEVELOPED THE 'ARCHITECTURAL TECHNOLOGY' PROGRAM TO ENABLE THE STUDENT TO ASSUME A ROLE IN THE FIELD OF ARCHITECTURE. THE PROGRAM TRAINS THE STUDENT TO PREPARE DRAWINGS, COMMUNICATE IDEAS THROUGH DRAWINGS, AS WELL AS FAMILIARIZING THE STUDENT WITH THE ROLE OF THE ARCHITECT, THE STRUCTURAL, MECHANICAL, AND ELECTRICAL SYSTEMS OF BUILDINGS, AND THE ARCHITECTURAL DESIGN PROCESS. 'POWDERED METALS TECHNOLOGY' IS A JOINT PROGRAM WITH HENNEPIN TECHNICAL CENTERS. COURSES IN COMMUNICATIONS, MATHEMATICS, HUMAN

RELATIONS, LABOR RELATIONS, SUPERVISION, CHEMISTRY, AND PHYSICS WILL BE TAKEN AT NORTH HENNEPIN. THE TECHNICAL COURSES IN PLASTICS ARE TAKEN AT THE AVTI.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED IN EACH PROGRAM.

--- LENGTH OF PROGRAM: THESE ARE TWO YEAR PROGRAMS.

- - - - - 27156 NORMANDALE COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE ENGINEERING OPTION OF THE 'MECHANICAL TECHNOLOGY' PROGRAM PREPARES STUDENTS TO WORK WITH GRADUATE ENGINEERS IN THE MANUFACTURING INDUSTRIES. STUDENTS TAKE COURSES IN MATH, DRAFTING, ELECTRONICS, STATICS, METALLURGY, AND DESIGN AS WELL AS ENGLISH AND TECHNICAL COMMUNICATION AND NON-TECHNICAL ELECTIVES.

--- DEGREES OFFERED: GRADUATES OF THE ENGINEERING OPTION OF THE MECHANICAL TECHNOLOGY PROGRAM RECEIVE AN ASSOCIATE IN APPLIED SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'OCCUPATIONAL SAFETY AND HEALTH' PROGRAM PREPARES STUDENTS FOR CAREERS AS SAFETY TECHNICIANS OR INVESTIGATORS AS WELL AS PROVIDING IN-SERVICE TRAINING FOR EMPLOYEES ENGAGED IN SAFETY ACTIVITIES. THE DEGREE PROGRAM COMBINES COURSES IN SAFETY, GENERAL EDUCATION, AND BUSINESS. STUDENTS ALSO CHOOSE ELECTIVES FROM THE BUSINESS AND SCIENCE AREAS.

--- DEGREES OFFERED: A VOCATIONAL CERTIFICATE AND AN ASSOCIATE DEGREE ARE OFFERED.

--- LENGTH OF PROGRAM: THE CERTIFICATE PROGRAM IS ONE YEAR LONG. THE ASSOCIATE DEGREE PROGRAM REQUIRES 2 YEAR OF STUDY.

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: 'AGRICULTURAL ENGINEERING TECHNOLOGY' IS AN UNDERGRADUATE CURRICULUM OFFERED BY THE DEPARTMENT OF AGRICULTURAL ENGINEERING. WITHIN THE CURRICULUM STUDENTS CHOOSE A PROGRAM EMPHASIZING THE USE AND DEVELOPMENT OF FARM MACHINES, EQUIPMENT, STRUCTURES, AND PROCESSING AS RELATED TO THEIR INTERESTS IN ANIMALS, PLANTS, SOILS, WATER, AND WASTES. THE PROGRAM CAN STRESS EITHER MANAGEMENT OR TECHNOLOGY IN PRODUCTION AGRICULTURE AND RELATED INDUSTRIES, BUT STUDENTS USUALLY COMBINE STUDIES IN BOTH. PROGRAMS EMPHASIZE STUDIES IN THE BIOLOGICAL SCIENCES AND IN PRINCIPLES DERIVED FROM THE ENGINEERING SCIENCES. THIS BACKGROUND HELPS DEVELOP USEFUL SOLUTIONS TO AGRICULTURAL AND BIOLOGICAL PROBLEMS. CONTINUING EDUCATION AND EXTENSION OFFERS SEVERAL UNDERGRADUATE DEVELOPMENT CERTIFICATE PROGRAMS FOR PART-TIME STUDENTS SEEKING TRAINING AS ENGINEERS OR TECHNICIANS. THE PROGRAMS ARE: 'CIVIL ENGINEERING' (90 CREDITS), 'INDUSTRIAL ENGINEERING' (90 CREDITS), 'ELECTRICAL ENGINEERING' (90 OR 135 CREDITS), 'MECHANICAL ENGINEERING' (94-96 CREDITS) AND 'ENGINEERING AND SCIENCE' (45 OR 90 CREDITS). GRADUATE LEVEL 'ENVIRONMENT HEALTH' PROGRAMS ARE OFFERED BY THE GRADUATE SCHOOL AND THE SCHOOL OF PUBLIC HEALTH. STUDENTS MAY FOLLOW A GENERAL PROGRAM WHICH COVERS MANY AREAS OF ENVIRONMENTAL CONTROL OR THEY MAY SPECIALIZE IN ONE AREA. AREAS OF SPECIALIZATION ARE: AIR POLLUTION, INSTITUTIONAL ENVIRONMENTAL HEALTH, OCCUPATIONAL SAFETY AND HEALTH, PUBLIC HEALTH BIOLOGY, RADIOLOGICAL HEALTH, AND WATER HYGIENE. COURSE WORK IS ALSO OFFERED IN MICROBIOLOGY, MILK AND FOOD SANITATION, GENERAL SANITATION, AND SOLID WASTES.

--- DEGREES OFFERED: A BACHELOR OF AGRICULTURAL ENGINEERING (B.A.G.E.) DEGREE IS OFFERED IN AGRICULTURAL ENGINEERING TECHNOLOGY. THIS DEGREE IS OFFERED JOINTLY BY THE COLLEGE OF AGRICULTURE AND THE INSTITUTE OF TECHNOLOGY. UNDERGRADUATE DEVELOPMENT CERTIFICATES ARE OFFERED IN THE EXTENSION PROGRAMS. THE MASTER OF SCIENCE AND DOCTOR OF PHILOSOPHY DEGREES IN ENVIRONMENTAL HEALTH ARE OFFERED THROUGH THE GRADUATE SCHOOL. THE MASTER OF PUBLIC HEALTH DEGREE IS OFFERED THROUGH THE SCHOOL OF PUBLIC HEALTH.

- - - - 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'MECHANIZED AGRICULTURAL MANAGEMENT' MAJOR OFFERS OPTIONS IN SOIL, WATER, AND CIVIL ENGINEERING TECHNOLOGY, POWER AND MACHINERY, AND STRUCTURES AND ENERGY SYSTEMS. THESE PROGRAMS ARE DESIGNED TO GIVE STUDENTS A KNOWLEDGE OF AGRICULTURE, POWER AND MACHINERY, SOIL AND WATER, FARM STRUCTURES, AND ELECTRICAL POWER AND PROCESSING IN PREPARATION FOR EMPLOYMENT IN RELATED FIELDS. THE 'EXECUTIVE HOUSEKEEPING' PROGRAM TRAINS STUDENTS TO OVERSEE THE MAINTENANCE OF PUBLIC FACILITIES. STUDENTS IN THIS PROGRAM TAKE COURSES IN AREAS SUCH AS ENGINEERING, ACCOUNTING, AND MANAGEMENT IN ADDITION TO GENERAL EDUCATION COURSES.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED IN EACH OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THESE ARE 2 YEAR PROGRAMS.

- - - - 82005 BROWN INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRONICS TECHNOLOGY 220 AND 440' PROGRAMS PREPARE STUDENTS FOR TECHNICIAN POSITIONS IN THE FIELD OF ELECTRONICS. STUDENTS COMPLETE COURSES IN PRE-TECHNICAL MATH, SCIENCE, AND ELECTRONICS AS WELL AS TRAINING IN THE OPERATING PRINCIPLES OF ALL STANDARD TRANSISTOR AND VACUUM TUBE CIRCUITS AND SYSTEMS. DURING THE SECOND YEAR, STUDENTS MAY CHOOSE FROM ONE FROM FIVE ELECTIVES: COMMUNICATIONS ELECTRONICS, BIOMEDICAL ELECTRONICS, COMPUTER TECHNOLOGY, COLOR TELEVISION, AND AUDIO-RECORDING TECHNOLOGY.

THE COLOR TELEVISION ELECTIVE COURSE IN THE ELECTRONICS 220 AND 440 PROGRAM GIVES STUDENTS A THOROUGH BACKGROUND IN THE SOPHISTICATED TUBE, TRANSISTORIZED AND INTEGRATED CIRCUIT COLOR TV CIRCUITS AND SYSTEMS. THEY LEARN TO ANALYZE AND CORRECT PROBLEMS IN ALL MAKES AND MODELS OF COLOR TV'S AS WELL AS ELECTRONIC FUNDAMENTALS. 'AUDIO AND RECORDING TECHNOLOGY' TEACHES THE PRINCIPLES OF RECORDING AND REPRODUCING SOUND ON DISC AND TAPE INCLUDING STEREO AND MULTICHANNEL SYSTEMS. STUDENTS TROUBLESHOOT AND REPAIR CONSUMER AUDIO AND SOUND REINFORCING EQUIPMENT.

'BIO-MEDICAL ELECTRONICS' PREPARES THE STUDENT FOR EMPLOYMENT IN HOSPITALS AND MEDICAL CLINICS AS BIO-MEDICAL ELECTRONIC TECHNICIANS. GRADUATES TEST, CALIBRATE, AND REPAIR A BROAD RANGE OF MEDICAL DIAGNOSTIC AND MONITORING EQUIPMENT AND WORK WITH MANUFACTURES TO DEVELOP NEW EQUIPMENT.

'COMPUTERS/MICROPROCESSORS' PREPARES THE STUDENT TO WORK IN THE AREA OF ELECTRONICS. STUDENTS WORK WITH THE CHIPS AS WELL AS DEVELOPING PROGRAMS TO RUN THE PROCESSING, LEARNING THE CHIP ARCHITECTURE, CIRCUIT ANALYSIS, TROUBLESHOOTING, AND PROGRAMMING. 'COMMUNICATIONS TECHNOLOGY' PREPARES THE STUDENT FOR EMPLOYMENT AS A COMMUNICATIONS TECHNICIAN IN RADIO AND TELEVISION BROADCASTING STATIONS OR WITH TWO-WAY COMMUNICATIONS OR MOBILE TELEPHONE SYSTEMS.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED FOR ELECTRONICS TECHNOLOGY. CERTIFICATES ARE AWARDED FOR SUCCESSFUL COMPLETION OF ELECTIVES.

--- LENGTH OF PROGRAM: THE 'ELECTRONICS TECHNOLOGY' PROGRAM IS 2 YEARS

LONG. ELECTIVE COURSES ARE EACH 12 WEEKS IN LENGTH.

--- SPECIAL COSTS: PROGRAM RELATED COSTS MAY VARY FROM \$30 to \$180 FOR BOOKS AND SUPPLIES.

- - - - - 82009 DUNWOODY INDUSTRIAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CIVIL TECHNOLOGY AND LAND SURVEYING' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR CAREERS AS TECHNICIANS IN THE SURVEYING AND CIVIL ENGINEERING FIELDS. COURSES INCLUDE: AREAS OF SURVEYING, DRAFTING, MAPPING, ROUTE SURVEYS AND PLANS, STRUCTURAL DEALING AND DESIGN, MATERIALS TESTING, AND FIELD INSPECTION, LAND DEVELOPMENT, AND REINFORCED CONCRETE PLANS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM CONSISTS OF 18 TRAINING PERIODS EACH 4 WEEKS LONG FOR A TOTAL OF 72 WEEKS.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 82027 MINNESOTA SCHOOL OF BUSINESS

--- OBJECTIVES OF THE PROGRAM: GRADUATES OF 'ELECTRONICS ENGINEERING TECHNOLOGY' PROGRAM WILL BE PREPARED TO WORK IN MANY AREAS OF MODERN ELECTRONICS. THEY WILL BE ACQUAINTED WITH NUMEROUS CIRCUITS AND THE SPECIALIZED TECHNIQUES DEMANDED BY THIS CAREER FIELD. THEY WILL BE EXPOSED TO A COMBINATION OF CLASSROOM THEORY AND HANDS-ON LABORATORY EXPERIMENTS THAT WILL ENABLE THEM TO QUICKLY GRASP THE PARTICULAR REQUIREMENTS OF THIS EVER-CHANGING TECHNOLOGY.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 96 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS AND EQUIPMENT.

253 ENGINEERING TECHNOLOGIES TRANSFER PROGRAMS:

- - - - - 27140 BRAINERD COMMUNITY COLLEGE
- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27144 ITASCA COMMUNITY COLLEGE
- - - - - 27145 WILLMAR COMMUNITY COLLEGE
- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE
- - - - - 27149 NORTHLAND COMMUNITY COLLEGE
- - - - - 27150 MESABI COMMUNITY COLLEGE
- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE
- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE
- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE
- - - - - 84013 NORTH CENTRAL BIBLE COLLEGE
- - - - - 84014 NORTHWESTERN COLLEGE
- - - - - 84015 PILLSBURY COLLEGE
- - - - - 84021 ST. PAUL BIBLE COLLEGE

271 VEHICLE AND EQUIPMENT OPERATION

Vehicle and equipment operation programs intend to prepare students to drive large vehicles, such as trucks and buses, or to operate heavy equipment used in construction, material handling, mining, or agriculture. These programs also intend to prepare students to do minor repair and maintenance work on their vehicles or equipment. Some vocational schools offer one-to three-month certificate programs in vehicle or equipment operation. Bus driver training may be available through private bus lines or school districts. Equipment operation training may be available through programs for truck drivers, however, Teamster Union locals may offer training for construction truck drivers. Many heavy truck drivers start as helpers in warehouses and docks, loading and unloading trucks and trailers, and helping drivers with relief driving. Others learn by driving smaller trucks and then progress to larger equipment and special loads. If truck drivers haul across state lines, they are required to meet U.S. Department of Transportation Regulations. (See PREP 6145.)

---PROGRAM ADMISSION: Students must be at least 18 years old to enter a commercial driving program. They must be at least 21 years old to be certified as a commercial truck or bus driver. Students should see if they can meet state or national licensing and driving requirements before they enter a program. A background in driver training or automobile mechanics is helpful.

---TYPICAL COURSE WORK: Bus or truck driver training usually includes actual road experience, plus instruction in:

- Defensive Driving
- Federal Regulations
- Engine and Equipment Operation
- Preventative Maintenance
- Operating Gas, Diesel, or Electrically Powered Engines
- Loading and Unloading Cargo and Passengers
- Reporting Delays or Accidents on the Road
- Verifying Load Against Shipping Papers
- Arranging Transportation for Personnel
- Keeping Records of Receipts and Fare

Heavy construction equipment training usually includes instruction in digging, ditching, sloping, stripping, grading, backfilling, clearing, and excavating.

---GRADUATION REQUIREMENTS: Requirements vary with school and program.

---RELATED PROGRAMS: PROG 278 Gas and Diesel Mechanics, 288 Construction Trades.

---DIRECTLY RELATED OCCUPATIONS: DESC 6143 Local Truck Drivers, 6145 Long Distance Truck Drivers, 6151 Heavy Equipment Operators, 6141 Bus Drivers, 6147 Taxi Drivers.

ASSOCIATED OCCUPATIONS: DESC 3113 Diesel Mechanics, 3115 Farm Equipment Mechanics.

CIPS: 49.02
49.99

SCHOOLS:

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'TRUCK DRIVING' PROGRAM PREPARES INDIVIDUALS TO DRIVE TRUCKS AND BUSES. INSTRUCTION INCLUDES OPERATING GAS, DIESEL, OR ELECTRICALLY POWERED VEHICLES; LOADING AND UNLOADING CARGO OR PASSENGERS; REPORTING DELAYS OR ACCIDENTS ON THE ROAD; VERIFYING LOAD AGAINST SHIPPING PAPERS; ARRANGING TRANSPORTATION FOR PERSONNEL; AND KEEPING RECORDS OF RECEIPTS AND FARES.

--- DEGREES OFFERED: A DIPLOMA IN TRUCK DRIVING IS OFFERED.

--- LENGTH OF PROGRAM: THE TRUCK DRIVING PROGRAM IS 8 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$135 FOR BOOKS, SUPPLIES, AND EQUIPMENT, AND \$6 FOR SAFETY GLASSES.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'TRUCK DRIVING' PROGRAM PREPARES INDIVIDUALS TO DRIVE TRUCKS AND BUSES. INSTRUCTION INCLUDES OPERATING GAS, DIESEL, OR ELECTRICALLY POWERED VEHICLES; LOADING AND UNLOADING CARGO OR PASSENGERS; REPORTING DELAYS OR ACCIDENTS ON THE ROAD; VERIFYING LOAD AGAINST SHIPPING PAPERS; ARRANGING TRANSPORTATION FOR PERSONNEL; AND KEEPING RECORDS OF RECEIPTS AND FARES.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES 6 MONTHS TO COMPLETE.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'TRUCK DRIVING' PROGRAM PREPARES INDIVIDUALS TO DRIVE TRUCKS AND BUSES. INSTRUCTION INCLUDES OPERATING GAS, DIESEL, OR ELECTRICALLY POWERED VEHICLES; LOADING AND UNLOADING CARGO OR PASSENGERS; REPORTING DELAYS OR ACCIDENTS ON THE ROAD; VERIFYING LOAD AGAINST SHIPPING PAPERS; ARRANGING TRANSPORTATION FOR PERSONNEL; AND KEEPING RECORDS OF RECEIPTS AND FARES.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS AWARDED.

--- LENGTH OF PROGRAM: TRUCK DRIVING IS A 4 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS, SUPPLIES, AND EQUIPMENT.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FREIGHT TRANSPORTATION' PROGRAM PREPARES INDIVIDUALS TO PERFORM MARKETING AND MANAGEMENT FUNCTIONS AND TASKS IN ENTERPRISES ENGAGED IN FREIGHT TRANSPORTATION OF ANY FORM OF TRANSPORTATION. INSTRUCTION IN ALL PHASES OF THE PHYSICAL MOVEMENT OF RAW MATERIALS, PRODUCTS, AND PERSONAL EFFECTS IS INCLUDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 11 MONTHS LONG.

- - - - - 25026 STAPLES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HEAVY EQUIPMENT OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO OPERATE AND MAINTAIN A VARIETY OF HEAVY EQUIPMENT, SUCH AS A CRAWLER TRACTOR, MOTOR GRADERS AND SCRAPERS, AND SHOVELS, INCLUDING DRAGLINE, HOE, AND CRANES. INSTRUCTION INCLUDES DIGGING, DITCHING, SLOPING, STRIPPING, GRADING, BACKFILLING, CLEARING, AND EXCAVATING.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

- - - - - 25032 EAST GRAND FORKS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'TRUCK DRIVING' PROGRAM PREPARES INDIVIDUALS TO DRIVE TRUCKS AND BUSES. INSTRUCTION INCLUDES OPERATING GAS,

DIESEL, OR ELECTRICALLY POWERED VEHICLES; LOADING AND UNLOADING CARGO OR PASSENGERS; REPORTING DELAYS OR ACCIDENTS ON THE ROAD; VERIFYING LOAD AGAINST SHIPPING PAPERS; ARRANGING TRANSPORTATION FOR PERSONNEL; AND KEEPING RECORDS OF RECEIPTS AND FARES.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OFFERED.

--- LENGTH OF PROGRAM: THE TRUCK DRIVING PROGRAM IS 6 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS AND SUPPLIES.

- - - - - 25033 RED WING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'TRUCK DRIVING' PROGRAM PREPARES INDIVIDUALS TO DRIVE TRUCKS AND BUSES. INSTRUCTION INCLUDES OPERATING GAS, DIESEL, OR ELECTRICALLY POWERED VEHICLES; LOADING AND UNLOADING CARGO OR PASSENGERS; REPORTING DELAYS OR ACCIDENTS ON THE ROAD; VERIFYING LOAD AGAINST SHIPPING PAPERS; ARRANGING TRANSPORTATION FOR PERSONNEL; AND KEEPING RECORDS OF RECEIPTS AND FARES.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: THE TRUCK DRIVING PROGRAM IS 4 MONTHS LONG.

Aviation management programs intend to prepare students for administrative positions within the air transportation industry. Related programs in air traffic control are also offered. Aviation management programs range from two-year associate degree programs at community colleges to four-year bachelor's degree programs at colleges and universities. These programs intend to give students aviation industry management skills for jobs such as marketing, public relations, manufacturing, air carrier operations, planning, and airport or small aviation business management.

Air traffic control programs may range from certificate and two-year associate degree programs at community colleges to four-year bachelor's degree programs at universities and colleges. These programs offer background preparation for students who wish to become air traffic controllers. The Federal Aviation Administration (FAA) provides 15-17 weeks of intense training in air traffic control at its academy in Oklahoma City for people who meet their strict admission requirements. This training, followed by several years of successful on-the-job experience, is required for employment as an air traffic controller (see PREP 6126).

---PROGRAM ADMISSION: Those interested in aviation management programs should have a background in speech and mathematics. High school or college English, mathematics, speech, and electronics are good background courses for air traffic control programs.

Persons who wish to enter the FAA air traffic control training program must meet tough admission requirements. See PREP 6126 for details.

---TYPICAL COURSE WORK: Most aviation management programs are taught through lectures, discussions, and reading. They usually include courses in:

Business Principles	Economics
Business Law	Accounting
Basic Statistics	Psychology
Intro to Data Processing	Speech
Mathematics	Written Communications
Aviation History	Air Transportation
Aviation Laws & Regulations	Air Cargo
Aviation Marketing	Airline and Airport
Transportation Principles	Management

Air traffic control programs are taught through lectures, discussions, and reading. They may include work experience or internships at airports. Courses usually include:

Science	Basic Meteorology
Mathematics	Basic Air Navigation
Engineering	Standard Air Traffic Control
Business	Communication Procedures
Social Studies	

FAA training programs include a combination of on-the-job and formal training to learn about airway systems, federal aviation regulations, controller equipment, and aircraft performance.

---GRADUATION REQUIREMENTS: College program requirements in aviation management and air traffic control vary by school and length of program. The FAA air traffic control training program gives pass/fail screening tests at the end of each training phase. A passing score is 70%. Failure

to pass these tests or on-the-job training within a set amount of time may lead to dismissal.

---THINGS TO KNOW: College graduates with civilian or military experience as controllers, navigators, or pilots have the best chances to enter the air traffic controller program.

---RELATED PROGRAMS: PROG 274 Flight Training, 275 Aviation Maintenance, 145 Business Management and Administration.

---DIRECTLY RELATED OCCUPATIONS: DESC 6126 Air Traffic Controllers.

ASSOCIATED OCCUPATIONS: DESC 6187 Airline Pilots and Flight Engineers, 3116 Aircraft Mechanics.

---REFERENCES:

Federal Aviation Administration
U.S. Department of Transportation
6201 34th Avenue South
Minneapolis, MN 55450

CIPS: 49.0103
49.0104
49.0105
49.0106
49.0199

SCHOOLS:

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AVIONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, MONITOR, AND TROUBLESHOOT ELECTRONIC INSTRUMENTATION USED IN MODERN AIRCRAFT. INSTRUCTION INCLUDES BASIC ELECTRONICS, AND SPECIALIZED INSTRUCTION IN ALL TYPES OF ELECTRONIC INSTRUMENTATION USED IN MODERN AIRCRAFT.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 20 MONTHS LONG.

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AIR TRAFFIC CONTROL' PROGRAM PREPARES INDIVIDUALS IN AIR TRAFFIC MANAGEMENT AND CONTROL. INSTRUCTION INCLUDES FLIGHT CONTROL; THE USE OF RADAR AND ELECTRONIC SCANNING DEVICES; PLOTTING OF FLIGHTS; RADIO COMMUNICATION; INTERPRETATION OF WEATHER CONDITIONS AFFECTING FLIGHTS; FLIGHT INSTRUMENTATION USED BY PILOTS; AND MAINTENANCE OF FLIGHT-CONTROL CENTER OF CONTROL-TOWER LOG BOOKS AND REPORTS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED IN THIS PROGRAM. THE STUDENT ALSO ATTENDS ANOKA-RAMSEY COMMUNITY COLLEGE AND RECEIVES AN ASSOCIATE OF ARTS DEGREE.

--- LENGTH OF PROGRAM: THE AIR TRAFFIC CONTROL PROGRAM IS 24 MONTHS LONG.

- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: AN 'AIR TRAFFIC CONTROL' PROGRAM AND 'AVIATION ADMINISTRATION OPTION' PROGRAM ARE OFFERED. BOTH PROGRAMS REQUIRE CONCURRENT STUDY AT ANOKA AVTI. THE AIR TRAFFIC CONTROL PROGRAM PROVIDES WORK EXPERIENCE AND ACADEMIC STUDY FOR PERSONS WHO DESIRE CAREERS AS AIR TRAFFIC CONTROL SPECIALISTS. THE ADMINISTRATION OPTION PROVIDES A BACKGROUND IN AVIATION OPERATION AND MANAGEMENT FOR THOSE INTERESTED IN

ADMINISTRATIVE CAREERS.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED IN EACH PROGRAM.

--- LENGTH OF PROGRAM: BOTH PROGRAMS ARE 2 YEARS LONG.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THREE AVIATION PROGRAMS ARE OFFERED: 'AIR TRAFFIC CONTROL', 'BUSINESS AVIATION', AND 'PROFESSIONAL PILOT'. THE AIR TRAFFIC CONTROL PROGRAM PREPARES STUDENTS WITH THE SPECIFIC KNOWLEDGE AND SKILLS NECESSARY TO SUCCESSFULLY COMPLETE THE AIR TRAFFIC CONTROL ENTRANCE EXAM WHICH WILL QUALIFY THEM FOR CONSIDERATION FOR CAREERS AS AIR TRAFFIC CONTROL SPECIALISTS. THE BUSINESS AVIATION PROGRAM PREPARES STUDENTS AS GROUND SUPPORT PERSONNEL, INCLUDING MANAGEMENT AND SALES PEOPLE, FOR THE AVIATION INDUSTRY. THE PROFESSIONAL PILOT PROGRAM PREPARES STUDENTS WHO ARE QUALIFIED FOR ENTRY LEVEL POSITIONS AS AIRCRAFT PILOTS, FLIGHT INSTRUCTORS AND GROUND SUPPORT PERSONNEL.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED IN EACH PROGRAM.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE TWO YEARS.

Flight training programs intend to prepare students to pass Federal Aviation Administration (FAA) written, oral, and flight tests to be licensed as private or commercial pilots. Program lengths vary depending on the type of school, the type of flight training, and the student's ability to learn and master the required knowledge and skills. Some community colleges and universities offer two-year associate degree programs. These programs usually prepare students to take the FAA written exams. They may also include flight lab courses. Private flight schools, independent flight instructors, the military, and self-study of written materials are other training possibilities. To be licensed, students must pass FAA written, oral, and flight tests supervised by an FAA examiner or inspector (see PREP 6187).

Those who have at least a private pilot's license may take additional training to earn the following ratings:

Instrument	Airline Transport Pilot
Seaplane	Flight Engineer
Multi-engine	Certified Flight Instructor

---PROGRAM ADMISSION: Students must be at least 16 years old to get a student pilot license. They must be at least 17 to earn a private pilot's license. The private pilot's license must be earned before a student may begin training for a commercial pilot's license. Before they begin flight training, students should get the class of medical certificate required by the FAA for the most advanced type of license they wish to earn. This will prevent them from training in an area in which they do not physically qualify. Associate degree programs usually require at least a high school diploma for admission. Flight training programs in the U.S. Air Force, Marines, and Navy require at least a bachelor's degree to enter. Persons should prepare for these programs by getting a good basic education with a focus on the basic sciences, especially math and physics. Helpful areas of study or knowledge are:

English	Physical Geography
Algebra	Psychology
Geometry	Drafting
Physics	Mechanical Shop
Chemistry	Electrical Shop

---TYPICAL COURSE WORK: Flight training programs usually begin with preparation on the ground, called 'ground school.' This includes technical reading, lectures, and discussions. Ground school covers subjects such as:

Flight Theory	Federal Aviation Regulations
Engine Operation	Radio Communications
Flight Instruments	Radio Navigation
Navigation Theory	Aeronautical Information
Meteorology	Publications

Some programs follow this with flight maneuvers in a ground simulator. This is followed by flight time with an instructor. When students show sufficient skill and confidence, they fly the aircraft by themselves. Associate degree programs usually include other courses such as:

Flight Physics	Aircraft Development
Drafting	Health
Algebra	Social Science
English Composition	Business Law

---GRADUATION REQUIREMENTS: Requirements vary depending on the type of flight training and the school. In most programs, students must pass written tests and flight tests and complete the number of training hours required by the FAA.

---THINGS TO KNOW: The Civil Air Patrol has volunteer programs for youth, 13 to 18 years old, and for adults. Members learn about flying by riding in aircraft, training for air search and rescue missions, and learning about aerospace technology and other programs. The Civil Air Patrol also offers college scholarships.

Some programs may combine flight training and aviation management into a program called 'flight operations.'

---RELATED PROGRAMS: PROG 275 Aviation Maintenance, 272 Aviation Management.

---DIRECTLY RELATED OCCUPATION: DESC 6187 Airline Pilots and Flight Engineers.

ASSOCIATED OCCUPATIONS: DESC 6126 Air Traffic Controllers, 3116 Aircraft Mechanics, 7856 Flight Attendants, 1173 Military Officers.

---REFERENCES:

Federal Aviation Administration
U.S. Department of Transportation
6201 34th Avenue South
Minneapolis, MN 55450

CIPS: 49.0101
49.0102

SCHOOLS:

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: 'AVIATION' COURSES AND INDIVIDUALLY DESIGNED DEGREE PROGRAMS IN THE AVIATION FIELD ARE OFFERED IN COOPERATION WITH THE UNIVERSITY OF MINNESOTA FLIGHT FACILITY. GRADUATES ARE ELIGIBLE FOR FAA CERTIFICATION AS COMMERCIAL PILOTS WITH INSTRUMENT AND MULTIENGINE RATINGS. COURSE IS OFFERED IN THE GENERAL COLLEGE.

--- DEGREES OFFERED: ASSOCIATE IN ARTS OR BACCALAUREATE DEGREES ARE OFFERED.

- - - - - 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'AGRICULTURAL SERVICES TECHNOLOGY' MAJOR OFFERS AN OPTION IN AGRICULTURAL AVIATION TECHNOLOGY. THIS PROGRAM PROVIDES STUDENTS WITH FLIGHT AND GROUND AERONAUTICAL TRAINING AS WELL AS TECHNICAL AGRICULTURAL, BUSINESS, AND GENERAL EDUCATION COURSES. IT PREPARES STUDENTS TO ENTER AGRICULTURAL AVIATION.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE WITH A MAJOR IN AGRICULTURAL SERVICES TECHNOLOGY (AGRICULTURAL AVIATION TECHNOLOGY OPTION) IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2-YEAR PROGRAM.

Aviation maintenance programs are designed to prepare people to inspect, repair, and generally service and overhaul aircraft body parts (airframe), and engines and propellers (power plant). They also intend to prepare students to meet Federal Aviation Administration (FAA) licensing requirements for airframe and power plant (A & P) mechanics. Private and public vocational schools, community colleges, and universities may offer FAA approved programs. Most programs are 18 to 24 months long and include both airframe mechanics and power plant mechanics training. Airframe training stresses woodworking, welding, painting, sheet metal work, instruments, assembly, and rigging. Power plant training focuses on engines, propellers, lubrication, magnetos, and carburetion. Students may also receive training through apprenticeships and on-the-job training with airlines, in the military, or as helpers to A & P mechanics. These types of training generally take longer than an FAA approved school program. (See PREP 3116.)

---PROGRAM ADMISSION: It is strongly recommended that those who wish to enter vocational schools or college training programs have at least a high school diploma or its equivalent. To enter these programs it is helpful to have training or experience in the following areas:

Drafting	Electricity/Electronics
Mechanics	Advanced Mathematics
Physics	Aerospace Education
Chemistry	English

Students familiar with or able to understand computers, recordkeeping systems, maintenance manuals, air regulations, and aircraft logs and records will find this background helpful. Students may be required to buy a basic set of mechanics tools (or supplement the tools they already own).

---TYPICAL COURSE WORK: Most aviation maintenance programs are taught through lectures, demonstrations, visual aids, and shop experience. Students apply classroom theory to practical work on real or model aircraft. For every hour of classroom lecture, students may spend seven hours in lab gaining practical experience. Typical courses include:

Physics	Structural Materials
Aircraft Drawing	Non-structural Materials
Shop Math	Basic Electricity
Engines	Aircraft Materials and Processes
Propellers	

Associate degree students must also take general education courses such as health or first aid, communication skills, applied economics, and mathematics.

---GRADUATION REQUIREMENTS: Vary; contact school for details.

---THINGS TO KNOW: Shop courses may have lab fees. Most employers prefer FAA licensed mechanics who have at least a high school education or its equivalent.

Credit for military service, on-the-job training, or other documented experience may often be arranged.

---RELATED PROGRAMS: PROG 274 Flight Training, 272 Aviation Management, 278 Gas and Diesel Mechanics.

---DIRECTLY RELATED OCCUPATION: DESC 3116 Aircraft Mechanics.
ASSOCIATED OCCUPATIONS: DESC 6187 Airline Pilots and Flight Engineers,
6126 Air Traffic Controllers.

---REFERENCES: For a free list of certified aviation maintenance technician schools, request 'Advisory Circular 147-2V' from:
U.S. Department of Transportation
Publications Section, M-443.1
Washington, D.C. 20590

For apprenticeship and on-the-job training information, write for a list of member airlines:

Air Transport Association of America
1709 New York Avenue, NW
Washington, D.C. 20006

For aircraft manufacturing industry training, write for a list of member manufacturers:

Aerospace Industries Association of America
1725 De Sales Street, NW
Washington, D.C. 20036

---REFERENCES:
Federal Aviation Administration
U.S. Department of Transportation
6201 34th Avenue South
Minneapolis, MN 55450

CIPS: 47.0602

SCHOOLS:

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'AVIONICS TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, MONITOR, AND TROUBLESHOOT ELECTRONIC INSTRUMENTATION USED IN MODERN AIRCRAFT. INSTRUCTION INCLUDES BASIC ELECTRONICS, AND SPECIALIZED INSTRUCTION IN ALL TYPES OF ELECTRONIC INSTRUMENTATION USED IN MODERN AIRCRAFT.
--- LENGTH OF PROGRAM: THIS IS A 20 MONTH PROGRAM.

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'AIRCRAFT MECHANICS' PROGRAM PREPARES INDIVIDUALS TO INSPECT, REPAIR, SERVICE, AND OVERHAUL AIRCRAFT PARTS, INCLUDING ENGINES, PROPELLERS, INSTRUMENTS, AIRFRAMES, FUEL AND OIL TANKS, CONTROL CABLES, AND HYDRAULIC UNITS. THIS PROGRAM IS DESIGNED TO MEET FEDERAL AVIATION ADMINISTRATION REQUIREMENTS FOR LICENSING AS AN AIR FRAME/POWER-PLANT MECHANIC.
--- DEGREES OFFERED: A DIPLOMA IS AWARDED.
--- LENGTH OF PROGRAM: STUDENTS MAY COMPLETE THE FULL PROGRAM IN 75 WEEKS.
--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR THE ENTIRE PROGRAM WILL INCLUDE ABOUT \$120 FOR BOOKS, \$4 FOR SAFETY GLASSES, \$16 FOR UNIFORMS AND/OR SUPPLIES, AND \$20 FOR A DEPOSIT ON TOOLS.

- - - - - 25028 THIEF RIVER FALLS AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'AIRCRAFT MECHANICS' PROGRAM PREPARES

INDIVIDUALS TO INSPECT, REPAIR, SERVICE, AND OVERHAUL AIRCRAFT PARTS, INCLUDING ENGINES, PROPELLERS, INSTRUMENTS, AIRFRAMES, FUEL AND OIL TANKS, CONTROL CABLES, AND HYDRAULIC UNITS. THIS PROGRAM IS DESIGNED TO MEET FEDERAL AVIATION ADMINISTRATION REQUIREMENTS FOR LICENSING AS AN AIR FRAME/POWER-PLANT MECHANIC.

--- DEGREES OFFERED: DEGREES OF OCCUPATIONAL PROFICIENCY ARE AWARDED.

--- LENGTH OF PROGRAM: THE PROGRAM LASTS 21 MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE APPROXIMATELY \$450 FOR BOOKS, SUPPLIES, TOOLS AND COVERALLS.

- - - - - 25031 WINONA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AIRCRAFT MECHANICS' PROGRAM PREPARES INDIVIDUALS TO INSPECT, REPAIR, SERVICE, AND OVERHAUL AIRCRAFT PARTS, INCLUDING ENGINES, PROPELLERS, INSTRUMENTS, AIRFRAMES, FUEL AND OIL TANKS, CONTROL CABLES, AND HYDRAULIC UNITS. THIS PROGRAM IS DESIGNED TO MEET FEDERAL AVIATION ADMINISTRATION REQUIREMENTS FOR LICENSING AS AN AIR FRAME/POWER-PLANT MECHANIC.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS AWARDED TO STUDENTS WHO SUCCESSFULLY COMPLETE THE PROGRAM.

--- LENGTH OF PROGRAM: AIRCRAFT MECHANICS IS A 21 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR AIRCRAFT MECHANICS WILL INCLUDE ABOUT \$650 FOR TOOLS, \$225 FOR BOOKS AND SUPPLIES, AND \$74 FOR A UNIFORM.

- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: 'AIR FRAME MECHANIC' AND 'POWER PLANT MECHANIC' ARE COOPERATIVE PROGRAMS OFFERED BY MINNEAPOLIS COMMUNITY COLLEGE AND MINNEAPOLIS TECHNICAL INSTITUTE. STUDENTS COMPLETE TECHNICAL COURSES AT MTI AND GENERAL EDUCATION COURSES AT MINNEAPOLIS C.C.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE AND A VOCATIONAL CERTIFICATE ARE OFFERED IN EACH PROGRAM.

--- LENGTH OF PROGRAM: BOTH PROGRAMS ARE TWO YEARS LONG.

Gas and diesel mechanic training programs intend to prepare students to maintain, repair, and service gasoline or diesel engine systems. Gasoline engine mechanic programs may cover engine, fuel, electrical, cooling, brake, drive train, and suspension systems. Diesel mechanic students diagnose problems; they repair and adjust fuel-injection systems, air and water pumps, generators, governors, power units, controls, and transmissions. This work is done on vehicles such as buses, ships, trucks, railroad locomotives, construction equipment, and stationary diesel engines, such as in electrical generators.

There are several ways to learn how to be a gas or diesel mechanic. Most people start as helpers to skilled mechanics and learn the job in three to four years. Community colleges and trade and technical schools may offer programs that range from several months to two years. The shorter programs focus on one part of engine repair. Longer programs usually include overall engine theory, repair training, and related business courses. Some colleges offer four-year degrees in automotive technology. Other training programs include those in high school shop classes, the military, correspondence study schools, and three- to four-year union apprenticeships.

---PROGRAM ADMISSION: Most auto or diesel mechanic programs prefer high school graduates. A background in the following areas is recommended:

Auto Shop	Science
Machine Shop	Math
Electrical Shop	Drafting
Metal Shop	

---TYPICAL COURSE WORK: Auto mechanic programs include lectures, technical reading, and shop work. Using charts and filmstrips, teachers explain how cars work and their different systems. Students read technical materials and learn how to read repair manuals. Students then apply, under supervision, what they have learned in the classroom to real auto repair jobs in the shop. About four hours of shop time are spent for every hour in the classroom. Course work in auto mechanic programs includes:

Automotive Service	Machine Shop Orientation
Carburetion	Welding
Brakes	Drafting
Hydraulics	Communications
Steering and Suspension	Business
Transmissions	Mathematics
Electrical Components	Internal Combustion Theory

Diesel engine mechanic programs are similar to auto mechanics programs. Students learn, through lectures and shop classes, how diesel engines work. They learn how to repair different systems used on trucks, buses, ships, and drilling equipment. Courses may include:

Engine Overhaul	Shop Math
Clutches	Business Principles
Transmissions	Metal Arts
Electrical Systems	Blueprint Reading
Fuel Systems	Precision Measurement
Engine Principles	Communications
Brakes	Human Relations
Hydraulics	

---GRADUATION REQUIREMENTS: Requirements vary. See school catalogs for more information.

---THINGS TO KNOW: Many programs require that students purchase tools.

The National Institute for Automotive Service Excellence (NIASE) has a voluntary testing program for qualified auto mechanics. Certificates are awarded; no instruction is involved. Certification tests are also given for heavy duty truck (bus) mechanics.

---RELATED PROGRAMS: PROG 279 Small Engine Repair (for motorcycles, chain saws, and other small engines), 295 Metalworking, 287 Industrial Mechanics, 271 Vehicle and Equipment Operation, 631 Apprenticeship Programs.

---DIRECTLY RELATED OCCUPATIONS: DESC 3112 Automobile Mechanics, 3113 Diesel Mechanics.

ASSOCIATED OCCUPATIONS: DESC 3118 Small Engine Repairers, 9824 Service Station Attendants.

CIPS: 15.0803
47.0601
47.0604
47.0605
47.0699

SCHOOLS:

- - - - - 25001 ALBERT LEA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'TRUCK/DIESEL MECHANICS' PROGRAM PREPARES INDIVIDUALS TO REPAIR DIESEL ENGINES AND VEHICLES SUCH AS BUSES, SHIPS, TRUCKS, RAILROAD LOCOMOTIVES, AND CONSTRUCTION EQUIPMENT, AND TO REPAIR STATIONARY DIESEL ENGINES IN ELECTRICAL GENERATORS AND RELATED EQUIPMENT. INSTRUCTION INCLUDES DIAGNOSING MALFUNCTIONS; DISASSEMBLING ENGINES AND REPLACING PARTS; REPAIRING AND ADJUSTING FUEL-INJECTION SYSTEMS, OIL AND WATER PUMPS, GENERATORS, GOVERNORS, AUXILIARY AND ACCOMPANYING POWER UNITS, CONTROLS, AND TRANSMISSIONS, USING A VARIETY OF TOOLS AND TESTING AND DIAGNOSTIC EQUIPMENT.

THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE TRUCK/DIESEL PROGRAM IS 20 MONTHS LONG. THE AUTO MECHANICS PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: TOOLS, BOOKS, AND SUPPLIES TOTAL \$515.

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'TRUCK/DIESEL MECHANICS' PROGRAM PREPARES INDIVIDUALS TO REPAIR DIESEL ENGINES AND VEHICLES SUCH AS BUSES, SHIPS, TRUCKS, RAILROAD LOCOMOTIVES, AND CONSTRUCTION EQUIPMENT, AND TO REPAIR STATIONARY DIESEL ENGINES IN ELECTRICAL GENERATORS AND RELATED EQUIPMENT. INSTRUCTION INCLUDES DIAGNOSING MALFUNCTIONS; DISASSEMBLING ENGINES AND REPLACING PARTS; REPAIRING AND ADJUSTING FUEL-INJECTION SYSTEMS, OIL AND WATER PUMPS, GENERATORS, GOVERNORS, AUXILIARY AND

ACCOMPANYING POWER UNITS, CONTROLS, AND TRANSMISSIONS, USING A VARIETY OF TOOLS AND TESTING AND DIAGNOSTIC EQUIPMENT.

--- DEGREES OFFERED: DIPLOMAS ARE OFFERED IN THIS PROGRAM.

--- LENGTH OF PROGRAM: THE TRUCK/DIESEL PROGRAM IS 20 MONTHS LONG.

--- SPECIAL COSTS: COSTS FOR THE TRUCK/DIESEL MECHANICS PROGRAM WILL INCLUDE \$600-\$950 FOR BOOKS SUPPLIES, EQUIPMENT AND OTHER COSTS.

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS.

--- DEGREES OFFERED: A DIPLOMA IN AUTO MECHANICS IS OFFERED.

--- LENGTH OF PROGRAM: THE AUTO MECHANICS PROGRAM IS 19 1/2 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$50 FOR BOOKS AND SUPPLIES, \$700 FOR TOOLS AND A \$25 LAB FEE.

- - - - - 25004 AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS.

--- DEGREES OFFERED: A DIPLOMA OF OCCUPATIONAL PROFICIENCY AND TRADE CERTIFICATE IS OFFERED IN THE AUTO MECHANICS PROGRAM.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR AUTO MECHANICS ARE \$680. THESE COSTS INCLUDE TOOLS, BOOKS/SUPPLIES AND MISCELLANEOUS.

- - - - - 25005 BEMIDJI AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS. THE 'AUTO MACHINIST' PROGRAM IS A NEW OR REVISED PROGRAM FOR WHICH THERE WAS NO AVAILABLE DESCRIPTION AT THE UPDATE OF THIS EDITION OF MCIS. PLEASE CONTACT THE AVTI FOR INFORMATION ON THIS PROGRAM.

--- DEGREES OFFERED: A DEGREE IN AUTO MECHANIC OR AUTO MACHINIST IS OFFERED. CERTIFICATE OF COMPLETION AND AN ATTENDANCE CERTIFICATE IN THE AUTOMOTIVE MACHINIST PROGRAM ARE OFFERED.

--- LENGTH OF PROGRAM: THE AUTO MECHANICS PROGRAM AND THE AUTO MACHINIST PROGRAM ARE EACH 18 MONTHS LONG. THE AUTO MACHINIST PROGRAM MUST BE PRECEDED BY A POST HIGH SCHOOL AUTO MECHANICS PROGRAM.

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL

COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS.
--- DEGREES OFFERED: A DIPLOMA OF COMPLETION AND A CERTIFICATE OF ATTENDANCE IN AUTO MECHANICS ARE OFFERED.
--- LENGTH OF PROGRAM: THE AUTO MECHANICS PROGRAM IS DIVIDED INTO 2 PARTS. PART 1 IS 11 MONTHS AND PART 2 IS 9 MONTHS LONG.
--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$80 FOR BOOKS, AND \$350 FOR TOOLS AND SUPPLIES.

- - - - - 25007 CANBY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS. THE 'TRUCK/DIESEL MECHANICS' PROGRAM PREPARES INDIVIDUALS TO REPAIR DIESEL ENGINES AND VEHICLES SUCH AS BUSES, SHIPS, TRUCKS, RAILROAD LOCOMOTIVES, AND CONSTRUCTION EQUIPMENT, AND TO REPAIR STATIONARY DIESEL ENGINES IN ELECTRICAL GENERATORS AND RELATED EQUIPMENT. INSTRUCTION INCLUDES DIAGNOSING MALFUNCTIONS; DISASSEMBLING ENGINES AND REPLACING PARTS; REPAIRING AND ADJUSTING FUEL-INJECTION SYSTEMS, OIL AND WATER PUMPS, GENERATORS, GOVERNORS, AUXILIARY AND ACCOMPANYING POWER UNITS, CONTROLS, AND TRANSMISSIONS, USING A VARIETY OF TOOLS AND TESTING AND DIAGNOSTIC EQUIPMENT.

--- DEGREES OFFERED: DIPLOMAS OF GRADUATION ARE OFFERED.
--- LENGTH OF PROGRAM: THE TRUCK/DIESEL MECHANICS PROGRAM IS 22 MONTHS LONG. THE TOTAL AUTO MECHANICS PROGRAM IS 20 MONTHS LONG. THERE ARE SPECIALIZED PROGRAMS UPON REQUEST.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS. THE 'TRUCK/DIESEL MECHANICS' PROGRAM PREPARES INDIVIDUALS TO REPAIR DIESEL ENGINES AND VEHICLES SUCH AS BUSES, SHIPS, TRUCKS, RAILROAD LOCOMOTIVES, AND CONSTRUCTION EQUIPMENT, AND TO REPAIR STATIONARY DIESEL ENGINES IN ELECTRICAL GENERATORS AND RELATED EQUIPMENT. INSTRUCTION INCLUDES DIAGNOSING MALFUNCTIONS; DISASSEMBLING ENGINES AND REPLACING PARTS; REPAIRING AND ADJUSTING FUEL-INJECTION SYSTEMS, OIL AND WATER PUMPS, GENERATORS, GOVERNORS, AUXILIARY AND ACCOMPANYING POWER UNITS, CONTROLS, AND TRANSMISSIONS, USING A VARIETY OF TOOLS AND TESTING AND DIAGNOSTIC EQUIPMENT.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY AND A CERTIFICATE ARE OFFERED.
--- LENGTH OF PROGRAM: BOTH OF THESE PROGRAMS TAKES 22 MONTHS TO COMPLETE.
--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR AUTO MECHANICS ARE \$1000; FOR TRUCK/DIESEL MECHANICS ARE \$1500. THIS IS FOR BOOKS, SUPPLIES, TOOLS, AND SAFETY GLASSES.

- - - - - 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF

AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS. THE 'TRUCK/DIESEL MECHANICS' PROGRAM PREPARES INDIVIDUALS TO REPAIR DIESEL ENGINES AND VEHICLES SUCH AS BUSES, SHIPS, TRUCKS, RAILROAD LOCOMOTIVES, AND CONSTRUCTION EQUIPMENT, AND TO REPAIR STATIONARY DIESEL ENGINES IN ELECTRICAL GENERATORS AND RELATED EQUIPMENT. INSTRUCTION INCLUDES DIAGNOSING MALFUNCTIONS; DISASSEMBLING ENGINES AND REPLACING PARTS; REPAIRING AND ADJUSTING FUEL-INJECTION SYSTEMS, OIL AND WATER PUMPS, GENERATORS, GOVERNORS, AUXILIARY AND ACCOMPANYING POWER UNITS, CONTROLS, AND TRANSMISSIONS, USING A VARIETY OF TOOLS AND TESTING AND DIAGNOSTIC EQUIPMENT.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THESE ARE 18 MONTH PROGRAMS.

--- SPECIAL COSTS: BOOKS, SUPPLIES, EQUIPMENT, AND OTHER TOOL COSTS FOR AUTOMOTIVE MECHANICS PROGRAM ARE \$800 AND \$1,400 FOR TRUCK/DIESEL MECHANICS PROGRAM. OTHER RELATED COSTS ARE \$85 FOR UNIFORMS.

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS. THE 'TRUCK/DIESEL MECHANICS' PROGRAM PREPARES INDIVIDUALS TO REPAIR DIESEL ENGINES AND VEHICLES SUCH AS BUSES, SHIPS, TRUCKS, RAILROAD LOCOMOTIVES, AND CONSTRUCTION EQUIPMENT, AND TO REPAIR STATIONARY DIESEL ENGINES IN ELECTRICAL GENERATORS AND RELATED EQUIPMENT. INSTRUCTION INCLUDES DIAGNOSING MALFUNCTIONS; DISASSEMBLING ENGINES AND REPLACING PARTS; REPAIRING AND ADJUSTING FUEL-INJECTION SYSTEMS, OIL AND WATER PUMPS, GENERATORS, GOVERNORS, AUXILIARY AND ACCOMPANYING POWER UNITS, CONTROLS, AND TRANSMISSIONS, USING A VARIETY OF TOOLS AND TESTING AND DIAGNOSTIC EQUIPMENT.

--- DEGREES OFFERED: A CERTIFICATE OR DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE AUTO MECHANICS PROGRAM AND THE TRUCK/DIESEL MECHANICS PROGRAM ARE BOTH UP TO 92 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$550 FOR THE AUTO MECHANICS PROGRAM, MAINLY FOR PERSONAL HAND TOOL SETS.

- - - - - 25011 EVELETH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE AUTO MECHANICS PROGRAM IS 18 MONTHS LONG.

- - - - - 25014 HIBBING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF

AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAM DEPENDS ON THE SUBJECT CHOSEN AND RANGES FROM 6 WEEKS TO 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR AUTO MECHANICS INCLUDES \$80 PER YEAR FOR BOOKS AND \$500 FOR TOOLS.

- - - - - 25015 HUTCHINSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS.

--- DEGREES OFFERED: STUDENTS WHO MEET ALL OF THE CORE REQUIREMENTS (COMPETENCIES) ESTABLISHED FOR THIS PROGRAM RECEIVE A DEGREE.

--- LENGTH OF PROGRAM: THE AUTO MECHANICS PROGRAM IS 20 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR AUTO MECHANICS ARE \$35 FOR THE FIRST YEAR AND \$490 FOR THE SECOND YEAR. TOOLS ARE LOANED DURING THE FIRST YEAR.

- - - - - 25016 JACKSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS.

--- DEGREES OFFERED: A TECHNICAL SCHOOL DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: AUTO MECHANICS IS AN 18 MONTH PROGRAM.

--- SPECIAL COSTS: FIRST YEAR COSTS FOR TOOLS, BOOKS AND SUPPLIES ARE \$650; \$250 FOR THE SECOND YEAR.

- - - - - 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS OFFERED.

--- LENGTH OF PROGRAM: AUTO MECHANICS IS AN 84 WEEK PROGRAM.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$735 FOR TOOLS AND MATERIALS.

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS. THE 'TRUCK/DIESEL MECHANICS' PROGRAM PREPARES INDIVIDUALS TO REPAIR DIESEL

ENGINES AND VEHICLES SUCH AS BUSES, SHIPS, TRUCKS, RAILROAD LOCOMOTIVES, AND CONSTRUCTION EQUIPMENT, AND TO REPAIR STATIONARY DIESEL ENGINES IN ELECTRICAL GENERATORS AND RELATED EQUIPMENT. INSTRUCTION INCLUDES DIAGNOSING MALFUNCTIONS; DISASSEMBLING ENGINES AND REPLACING PARTS; REPAIRING AND ADJUSTING FUEL-INJECTION SYSTEMS, OIL AND WATER PUMPS, GENERATORS, GOVERNORS, AUXILIARY AND ACCOMPANYING POWER UNITS, CONTROLS, AND TRANSMISSIONS, USING A VARIETY OF TOOLS AND TESTING AND DIAGNOSTIC EQUIPMENT.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED TO STUDENTS WHO COMPLETE EACH OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THE AUTO MECHANICS PROGRAM IS 12 MONTHS LONG. THE TRUCK/DIESEL MECHANICS PROGRAM IS 18 MONTHS LONG, AND THE IMPORT/COMPACT CAR MECHANICS PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$70 FOR BOOKS, \$4 FOR SAFETY GLASSES, AND \$30 FOR A TOOL DEPOSIT FOR AUTO MECHANICS. IMPORT/COMPACT COSTS WILL INCLUDE THE SAFETY GLASSES AND TOOL DEPOSIT. TRUCK/DIESEL MECHANICS ALSO REQUIRES SAFETY GLASSES, A TOOL DEPOSIT, AND ABOUT \$70 FOR BOOKS.

- - - - - 25019 MOORHEAD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: BOTH PROGRAMS ARE 20 MONTHS LONG.

- - - - - 25020 PINE TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OR CERTIFICATE OF COMPLETION IS AWARDED TO THOSE WHO SUCCESSFULLY COMPLETE THIS PROGRAM.

--- LENGTH OF PROGRAM: AUTO MECHANICS IS AN 18 MONTH PROGRAM.

- - - - - 25021 PIPESTONE AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS.

--- DEGREES OFFERED: STUDENTS WHO COMPLETE THIS PROGRAM ARE AWARDED A DEGREE OF OCCUPATIONAL PROFICIENCY.

--- LENGTH OF PROGRAM: THIS IS A 21 MONTH PROGRAM.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'TRUCK/DIESEL MECHANICS' PROGRAM PREPARES INDIVIDUALS TO REPAIR DIESEL ENGINES AND VEHICLES SUCH AS BUSES, SHIPS, TRUCKS, RAILROAD LOCOMOTIVES, AND CONSTRUCTION EQUIPMENT, AND TO

REPAIR STATIONARY DIESEL ENGINES IN ELECTRICAL GENERATORS AND RELATED EQUIPMENT. INSTRUCTION INCLUDES DIAGNOSING MALFUNCTIONS; DISASSEMBLING ENGINES AND REPLACING PARTS; REPAIRING AND ADJUSTING FUEL-INJECTION SYSTEMS, OIL AND WATER PUMPS, GENERATORS, GOVERNORS, AUXILIARY AND ACCOMPANYING POWER UNITS, CONTROLS, AND TRANSMISSIONS, USING A VARIETY OF TOOLS AND TESTING AND DIAGNOSTIC EQUIPMENT.

THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS.

--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED TO STUDENTS WHO SUCCESSFULLY COMPLETE EACH PROGRAM.

--- LENGTH OF PROGRAM: TRUCK/DIESEL MECHANICS AND AUTO MECHANICS ARE 18 MONTH PROGRAMS.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS. THE 'TRUCK/DIESEL MECHANICS' PROGRAM PREPARES INDIVIDUALS TO REPAIR DIESEL ENGINES AND VEHICLES SUCH AS BUSES, SHIPS, TRUCKS, RAILROAD LOCOMOTIVES, AND CONSTRUCTION EQUIPMENT, AND TO REPAIR STATIONARY DIESEL ENGINES IN ELECTRICAL GENERATORS AND RELATED EQUIPMENT. INSTRUCTION INCLUDES DIAGNOSING MALFUNCTIONS; DISASSEMBLING ENGINES AND REPLACING PARTS; REPAIRING AND ADJUSTING FUEL-INJECTION SYSTEMS, OIL AND WATER PUMPS, GENERATORS, GOVERNORS, AUXILIARY AND ACCOMPANYING POWER UNITS, CONTROLS, AND TRANSMISSIONS, USING A VARIETY OF TOOLS AND TESTING AND DIAGNOSTIC EQUIPMENT.

--- DEGREES OFFERED: DIPLOMAS ARE AWARDED.

--- LENGTH OF PROGRAM: AUTO MECHANICS AND TRUCK/DIESEL MECHANICS PROGRAMS ARE BOTH 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR TOOLS, SUPPLIES, AND EQUIPMENT WILL BE ABOUT \$550 THE FIRST YEAR AND \$265 THE SECOND YEAR.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS. THE 'TRUCK/DIESEL MECHANICS' PROGRAM PREPARES INDIVIDUALS TO REPAIR DIESEL ENGINES AND VEHICLES SUCH AS BUSES, SHIPS, TRUCKS, RAILROAD LOCOMOTIVES, AND CONSTRUCTION EQUIPMENT, AND TO REPAIR STATIONARY DIESEL ENGINES IN ELECTRICAL GENERATORS AND RELATED EQUIPMENT. INSTRUCTION INCLUDES DIAGNOSING MALFUNCTIONS; DISASSEMBLING ENGINES AND REPLACING PARTS; REPAIRING AND ADJUSTING FUEL-INJECTION SYSTEMS, OIL AND WATER PUMPS, GENERATORS, GOVERNORS, AUXILIARY AND ACCOMPANYING POWER UNITS, CONTROLS, AND TRANSMISSIONS, USING A VARIETY OF TOOLS AND TESTING AND DIAGNOSTIC EQUIPMENT.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.
--- LENGTH OF PROGRAM: BOTH PROGRAMS ARE 18 MONTHS LONG.
--- SPECIAL COSTS: THE AUTO MECHANICS PROGRAM IS \$875. THE TRUCK/DIESEL MECHANICS PROGRAM IS \$950 THE FIRST YEAR AND \$275 THE SECOND YEAR.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS. THE 'TRUCK/DIESEL MECHANICS' PROGRAM PREPARES INDIVIDUALS TO REPAIR DIESEL ENGINES AND VEHICLES SUCH AS BUSES, SHIPS, TRUCKS, RAILROAD LOCOMOTIVES, AND CONSTRUCTION EQUIPMENT, AND TO REPAIR STATIONARY DIESEL ENGINES IN ELECTRICAL GENERATORS AND RELATED EQUIPMENT. INSTRUCTION INCLUDES DIAGNOSING MALFUNCTIONS; DISASSEMBLING ENGINES AND REPLACING PARTS; REPAIRING AND ADJUSTING FUEL-INJECTION SYSTEMS, OIL AND WATER PUMPS, GENERATORS, GOVERNORS, AUXILIARY AND ACCOMPANYING POWER UNITS, CONTROLS, AND TRANSMISSIONS, USING A VARIETY OF TOOLS AND TESTING AND DIAGNOSTIC EQUIPMENT.

--- DEGREES OFFERED: DIPLOMAS ARE AWARDED.
--- LENGTH OF PROGRAM: BOTH PROGRAMS TAKE 18 MONTHS TO COMPLETE.
--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE \$500 FOR AUTO MECHANICS AND \$600 FOR TRUCK MECHANICS. THIS INCLUDES BOOKS, TOOLS AND SUPPLIES.

- - - - - 25026 STAPLES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'TRUCK/DIESEL MECHANICS' PROGRAM PREPARES INDIVIDUALS TO REPAIR DIESEL ENGINES AND VEHICLES SUCH AS BUSES, SHIPS, TRUCKS, RAILROAD LOCOMOTIVES, AND CONSTRUCTION EQUIPMENT, AND TO REPAIR STATIONARY DIESEL ENGINES IN ELECTRICAL GENERATORS AND RELATED EQUIPMENT. INSTRUCTION INCLUDES DIAGNOSING MALFUNCTIONS; DISASSEMBLING ENGINES AND REPLACING PARTS; REPAIRING AND ADJUSTING FUEL-INJECTION SYSTEMS, OIL AND WATER PUMPS, GENERATORS, GOVERNORS, AUXILIARY AND ACCOMPANYING POWER UNITS, CONTROLS, AND TRANSMISSIONS, USING A VARIETY OF TOOLS AND TESTING AND DIAGNOSTIC EQUIPMENT.

--- DEGREES OFFERED: DIPLOMAS OR TRADE CERTIFICATES ARE AWARDED.
--- LENGTH OF PROGRAM: THE PROGRAM TAKES 18 MONTHS.
--- SPECIAL COSTS: BOOKS AND OTHER SUPPLIES ARE PROVIDED BY THE INSTITUTE. STUDENTS ARE EXPECTED TO PURCHASE THEIR OWN TOOLS (APPROXIMATELY \$400-\$800).

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS. THE 'AUTO MACHINIST' PROGRAM IS A NEW OR REVISED PROGRAM FOR WHICH THERE WAS NO AVAILABLE DESCRIPTION AT THE UPDATE OF THIS EDITION OF MCIS. PLEASE CONTACT THE AVTI FOR INFORMATION ON THIS PROGRAM.

THE 'TRUCK/DIESEL MECHANICS' PROGRAM PREPARES INDIVIDUALS TO REPAIR DIESEL ENGINES AND VEHICLES SUCH AS BUSES, SHIPS, TRUCKS, RAILROAD LOCOMOTIVES, AND CONSTRUCTION EQUIPMENT, AND TO REPAIR STATIONARY DIESEL ENGINES IN

ELECTRICAL GENERATORS AND RELATED EQUIPMENT. INSTRUCTION INCLUDES DIAGNOSING MALFUNCTIONS; DISASSEMBLING ENGINES AND REPLACING PARTS; REPAIRING AND ADJUSTING FUEL-INJECTION SYSTEMS, OIL AND WATER PUMPS, GENERATORS, GOVERNORS, AUXILIARY AND ACCOMPANYING POWER UNITS, CONTROLS, AND TRANSMISSIONS, USING A VARIETY OF TOOLS AND TESTING AND DIAGNOSTIC EQUIPMENT.

--- DEGREES OFFERED: DIPLOMAS OF RECOGNITION ARE OFFERED IN EACH OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THE TWO BASIC PROGRAMS ARE 12 MONTHS LONG, WHILE THE ADVANCED PROGRAMS VARY IN LENGTH.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$625 FOR AUTO MECHANICS; \$70 FOR AUTO MACHINIST; AND \$390 FOR TRUCK/DIESEL MECHANICS.

- - - - - 25028 THIEF RIVER FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS.

--- DEGREES OFFERED: DEGREES OF OCCUPATIONAL PROFICIENCY ARE AWARDED.

--- LENGTH OF PROGRAM: THE PROGRAM TAKES 18 MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE APPROXIMATELY \$35 FOR BOOKS, \$610 FOR TOOLS AND \$35 FOR COVERALLS.

- - - - - 25029 WADENA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES 18 MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR THE AUTO MECHANICS I PROGRAM WILL INCLUDE \$700 FOR BOOKS, SUPPLIES, AND TOOLS. COSTS FOR THE AUTO MECHANICS II PROGRAM WILL INCLUDE \$100 FOR BOOKS, SUPPLIES AND TOOLS.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OR A CERTIFICATE IS AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR THESE PROGRAMS WILL INCLUDE ABOUT \$110 FOR REFERENCE MATERIALS AND \$300 OR MORE FOR TOOLS.

- - - - - 25031 WINONA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTO MECHANICS' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE SERVICING AND MAINTENANCE OF ALL TYPES OF AUTOMOBILES. INSTRUCTION INCLUDES THE DIAGNOSIS OF MALFUNCTIONS IN AND

REPAIR OF ENGINES; FUEL, ELECTRICAL, COOLING, AND BRAKE SYSTEMS; DRIVE TRAIN AND SUSPENSION SYSTEMS; ADJUSTMENT AND REPAIR OF INDIVIDUAL COMPONENTS; AND SYSTEMS SUCH AS RADIATORS, TRANSMISSIONS, AND CARBURETORS.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: AUTO MECHANICS IS AN 18 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR THE FIRST YEAR WILL INCLUDE ABOUT \$550 FOR TOOLS, \$80 FOR BOOKS AND SUPPLIES, AND \$30 FOR UNIFORMS. SECOND-YEAR COSTS WILL INCLUDE ABOUT \$100 FOR TOOLS, \$25 FOR BOOKS AND \$30 FOR UNIFORMS.

- - - - - 25032 EAST GRAND FORKS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'TRUCK/DIESEL MECHANICS' PROGRAM PREPARES INDIVIDUALS TO REPAIR DIESEL ENGINES AND VEHICLES SUCH AS BUSES, SHIPS, TRUCKS, RAILROAD LOCOMOTIVES, AND CONSTRUCTION EQUIPMENT, AND TO REPAIR STATIONARY DIESEL ENGINES IN ELECTRICAL GENERATORS AND RELATED EQUIPMENT. INSTRUCTION INCLUDES DIAGNOSING MALFUNCTIONS; DISASSEMBLING ENGINES AND REPLACING PARTS; REPAIRING AND ADJUSTING FUEL-INJECTION SYSTEMS, OIL AND WATER PUMPS, GENERATORS, GOVERNORS, AUXILIARY AND ACCOMPANYING POWER UNITS, CONTROLS, AND TRANSMISSIONS, USING A VARIETY OF TOOLS AND TESTING AND DIAGNOSTIC EQUIPMENT.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED IN THIS PROGRAM.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$632 FOR BOOKS, SUPPLIES AND TOOLS.

- - - - - 25033 RED WING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'TRUCK/DIESEL MECHANICS' PROGRAM PREPARES INDIVIDUALS TO REPAIR DIESEL ENGINES AND VEHICLES SUCH AS BUSES, SHIPS, TRUCKS, RAILROAD LOCOMOTIVES, AND CONSTRUCTION EQUIPMENT, AND TO REPAIR STATIONARY DIESEL ENGINES IN ELECTRICAL GENERATORS AND RELATED EQUIPMENT. INSTRUCTION INCLUDES DIAGNOSING MALFUNCTIONS; DISASSEMBLING ENGINES AND REPLACING PARTS; REPAIRING AND ADJUSTING FUEL-INJECTION SYSTEMS, OIL AND WATER PUMPS, GENERATORS, GOVERNORS, AUXILIARY AND ACCOMPANYING POWER UNITS, CONTROLS, AND TRANSMISSIONS, USING A VARIETY OF TOOLS AND TESTING AND DIAGNOSTIC EQUIPMENT.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: THE AUTO MECHANICS PROGRAM IS NINE MONTHS LONG.

- - - - - 82009 DUNWOODY INDUSTRIAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOBILE MECHANICS' PROGRAM PREPARES STUDENTS FOR CAREERS AS AUTO MECHANICS. COURSES INCLUDE BASIC AUTO MECHANICS, ENGINES, CHASSIS COMPONENTS, AUTO ELECTRICITY, BRAKES, GAS AND DIESEL COMPUTERIZED ENGINE CONTROL SYSTEMS, DIFFERENTIALS, POWER STEERING, TUNE-UP, CARBURETION, STARTING AND IGNITION, TRANSMISSIONS, AND WIRING AND LIGHTING SYSTEMS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM CONSISTS OF 20 TRAINING PERIODS, EACH 4 WEEKS LONG, FOR A TOTAL OF 80 WEEKS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$10 SAFETY GLASSES.

279 SMALL ENGINE REPAIR

Small engine repair programs intend to prepare students to maintain and repair small internal combustion engines used on power equipment, such as outboard motors, lawnmowers, chain saws, tillers, motorcycles, snowmobiles, and snowblowers. Programs vary from certificate programs of several months, usually found at vocational schools, to one-year certificate and two-year associate degree programs at community colleges. Some students may receive training in three- to four-year apprenticeships. Some high schools offer two-year programs in small engine repair.

---PROGRAM ADMISSION: A high school education with a shop background is recommended for admission into small engine repair programs. A part-time job in a machine or repair shop or other experience working with small engines is also helpful.

---TYPICAL COURSE WORK: Training includes maintenance and repair, service procedures, and assembly and disassembly of all types of small engines. Teaching methods stress shop work, which may make up more than half of the class time. Other methods include classroom discussion, technical reading, tapes, films, lectures, and outside study. Academic classes may include basic math and business operation courses. Typical courses in this program include:

Shop Safety	Tune-Ups
Two-Stroke Engines	Trouble-Shooting Techniques
Four-Stroke Engines	Wheel Lacing And Truing
Carburetion	Engine Overhaul
Electrical Maintenance	Use of Special Tools
Mathematics	Job Estimates/Work Orders
Customer Relations	

---GRADUATION REQUIREMENTS: Vary with school and program. See school catalogs for more details.

---THINGS TO KNOW: Extra costs may include the purchase of tools and training manuals.

---RELATED PROGRAMS: PROG 278 Gas and Diesel Mechanics, 631 Apprenticeship Programs.

---DIRECTLY RELATED OCCUPATION: DESC 3118 Small Engine Repairers.

ASSOCIATED OCCUPATIONS: DESC 3112 Automobile Mechanics, 3113 Diesel Mechanics.

CIPS: 47.0606

SCHOOLS:

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SMALL ENGINE REPAIR' PROGRAM PREPARES INDIVIDUALS TO MAINTAIN AND REPAIR SMALL INTERNAL-COMBUSTION ENGINES USED ON PORTABLE POWER EQUIPMENT SUCH AS LAWNMOWERS, CHAIN SAWS, ROTARY TILLERS, MOTORCYCLES, SNOWMOBILES, AND BOATS. INSTRUCTION INCLUDES ENGINE OPERATION, DIAGNOSIS AND TESTING, EQUIPMENT, TOOLS, WELDING, MACHINE TOOLING, PARTS, TECHNICAL MANUALS, CARBURETION, IGNITION, COOLING AND LUBRICATION.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED IN THIS PROGRAM.
--- LENGTH OF PROGRAM: THE SMALL ENGINES PROGRAM IS 12 MONTHS LONG.

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SMALL ENGINE REPAIR' PROGRAM PREPARES INDIVIDUALS TO MAINTAIN AND REPAIR SMALL INTERNAL-COMBUSTION ENGINES USED ON PORTABLE POWER EQUIPMENT SUCH AS LAWMOWERS, CHAIN SAWS, ROTARY TILLERS, MOTORCYCLES, SNOWMOBILES, AND BOATS. INSTRUCTION INCLUDES ENGINE OPERATION, DIAGNOSIS AND TESTING, EQUIPMENT, TOOLS, WELDING, MACHINE TOOLING, PARTS, TECHNICAL MANUALS, CARBURETION, IGNITION, COOLING AND LUBRICATION.

--- DEGREES OFFERED: A DIPLOMA OF COMPLETION AND A CERTIFICATE OF ATTENDANCE IN SMALL ENGINE REPAIR ARE OFFERED.

--- LENGTH OF PROGRAM: THE SMALL ENGINE REPAIR PROGRAM IS 11 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$65 FOR BOOKS AND \$350 FOR TOOLS AND SUPPLIES.

- - - - - 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SMALL ENGINE REPAIR' PROGRAM PREPARES INDIVIDUALS TO MAINTAIN AND REPAIR SMALL INTERNAL-COMBUSTION ENGINES USED ON PORTABLE POWER EQUIPMENT SUCH AS LAWMOWERS, CHAIN SAWS, ROTARY TILLERS, MOTORCYCLES, SNOWMOBILES, AND BOATS. INSTRUCTION INCLUDES ENGINE OPERATION, DIAGNOSIS AND TESTING, EQUIPMENT, TOOLS, WELDING, MACHINE TOOLING, PARTS, TECHNICAL MANUALS, CARBURETION, IGNITION, COOLING AND LUBRICATION.

THE 'MOTORCYCLE MECHANICS' PROGRAM PREPARES INDIVIDUALS TO MAINTAIN AND REPAIR MOTORCYCLES. INSTRUCTION INCLUDES PARTS, DIAGNOSIS AND REPLACEMENT, REPAIR RELATED TO FUEL, ELECTRICAL TRANSMISSION, DRIVE AND SUSPENSION SYSTEMS AND ENGINES.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS OFFERED IN EACH PROGRAM.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE 9-12 MONTHS LONG.

--- SPECIAL COSTS: THE SMALL ENGINE REPAIR PROGRAM COSTS \$70 FOR BOOKS, \$65 FOR UNIFORMS, \$60 FOR FIELD TRIPS AND \$1000 FOR TOOLS. THE MOTORCYCLE PROGRAM COSTS \$50 FOR BOOKS, \$65 FOR UNIFORMS, \$55 FOR FIELD TRIPS AND \$625 FOR TOOLS.

- - - - - 25012 FARIBAULT AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SMALL ENGINE REPAIR' PROGRAM PREPARES INDIVIDUALS TO MAINTAIN AND REPAIR SMALL INTERNAL-COMBUSTION ENGINES USED ON PORTABLE POWER EQUIPMENT SUCH AS LAWMOWERS, CHAIN SAWS, ROTARY TILLERS, MOTORCYCLES, SNOWMOBILES, AND BOATS. INSTRUCTION INCLUDES ENGINE OPERATION, DIAGNOSIS AND TESTING, EQUIPMENT, TOOLS, WELDING, MACHINE TOOLING, PARTS, TECHNICAL MANUALS, CARBURETION, IGNITION, COOLING AND LUBRICATION.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE SMALL ENGINE REPAIR PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$1730 FOR BOOKS AND SUPPLIES.

- - - - - 25015 HUTCHINSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MOTORCYCLE MECHANICS' PROGRAM PREPARES INDIVIDUALS TO MAINTAIN AND REPAIR MOTORCYCLES. INSTRUCTION INCLUDES PARTS, DIAGNOSIS AND REPLACEMENT, REPAIR RELATED TO FUEL, ELECTRICAL TRANSMISSION, DRIVE AND SUSPENSION SYSTEMS AND ENGINES.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$55 PER YEAR FOR SAFETY EQUIPMENT AND FEES.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES 44 OR 88 WEEKS.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SMALL ENGINE REPAIR' PROGRAM PREPARES INDIVIDUALS TO MAINTAIN AND REPAIR SMALL INTERNAL-COMBUSTION ENGINES USED ON PORTABLE POWER EQUIPMENT SUCH AS LAWNMOWERS, CHAIN SAWS, ROTARY TILLERS, MOTORCYCLES, SNOWMOBILES, AND BOATS. INSTRUCTION INCLUDES ENGINE OPERATION, DIAGNOSIS AND TESTING, EQUIPMENT, TOOLS, WELDING, MACHINE TOOLING, PARTS, TECHNICAL MANUALS, CARBURETION, IGNITION, COOLING AND LUBRICATION.

--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: THIS IS A 12 MONTH PROGRAM.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$243 FOR TOOLS AND BOOKS.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'SMALL ENGINE REPAIR' PROGRAM PREPARES INDIVIDUALS TO MAINTAIN AND REPAIR SMALL INTERNAL-COMBUSTION ENGINES USED ON PORTABLE POWER EQUIPMENT SUCH AS LAWNMOWERS, CHAIN SAWS, ROTARY TILLERS, MOTORCYCLES, SNOWMOBILES, AND BOATS. INSTRUCTION INCLUDES ENGINE OPERATION, DIAGNOSIS AND TESTING, EQUIPMENT, TOOLS, WELDING, MACHINE TOOLING, PARTS, TECHNICAL MANUALS, CARBURETION, IGNITION, COOLING AND LUBRICATION.

--- DEGREES OFFERED: A DIPLOMA OF RECOGNITION IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM REQUIRES FROM 3 TO 16 MONTHS TO COMPLETE.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$75 FOR BOOKS AND SUPPLIES, AND \$60 FOR A SET OF STANDARD AND METRIC TOOLS (OPTIONAL).

- - - - - 25031 WINONA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MOTORCYCLE MECHANICS' PROGRAM PREPARES INDIVIDUALS TO MAINTAIN AND REPAIR MOTORCYCLES. INSTRUCTION INCLUDES PARTS, DIAGNOSIS AND REPLACEMENT, REPAIR RELATED TO FUEL, ELECTRICAL TRANSMISSION, DRIVE AND SUSPENSION SYSTEMS AND ENGINES.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS OFFERED IN THIS PROGRAM.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 9 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR MOTORCYCLE MECHANICS WILL BE ABOUT \$525 FOR TOOLS, \$30 FOR UNIFORMS AND \$20 FOR BOOKS.

- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'MARINE AND SMALL ENGINE MECHANIC' PROGRAM PROVIDES TRAINING IN THE MAINTENANCE AND OVERHAUL OF ALL SMALL TWO AND FOUR CYCLE ENGINES. STUDENTS STUDY THE ENGINES AND RELATED COMPONENTS OF SNOWMOBILES, OUTBOARD MOTORS, STERN DRIVES, MOTORCYCLES, LAWN MOWERS, AND CHAIN SAWS.

--- DEGREES OFFERED: STUDENTS WHO COMPLETE THIS PROGRAM MAY EARN EITHER A CERTIFICATE OF COMPETENCY OR A CERTIFICATE OF ATTENDANCE. THOSE WHO TAKE ADDITIONAL COURSES MAY ALSO EARN AN ASSOCIATE DEGREE.

--- LENGTH OF PROGRAM: THE CERTIFICATE PROGRAM IS 40 WEEKS LONG. THE ASSOCIATE DEGREE PROGRAM REQUIRES AT LEAST 2 YEARS OF COURSE WORK.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE BOOKS. THE PURCHASE OF TOOLS IS OPTIONAL.

281 AUTO BODY REPAIR

Auto body repair programs intend to prepare people to repair automobile bodies and fenders. Training may be found in one-year certificate and two-year associate degree programs at community colleges or in certificate programs offered by vocational schools. Some students learn these skills through on-the-job training or four-year apprenticeship programs. Apprenticeship programs include on-the-job training and related classroom instruction and are usually union sponsored.

---PROGRAM ADMISSION: A background in general shop, metal work, metal forming, mechanical drawing, and auto body repair is helpful. Science and mathematics courses are also helpful.

---TYPICAL COURSE WORK: Most programs stress practical hands-on learning done in the program's auto repair shop. Students learn how to weld metals; how to shape fenders and bumpers; how to replace windows, lights, and other parts of the car; and how to paint automobiles. In the classroom teachers explain how the shop work should be done, stressing safety. Many programs also cover how to estimate the time needed to complete a job and how to estimate the costs of different kinds of repairs. Courses may include:

- Automobile Body Repair
- Arc Welding
- Oxyacetylene Welding
- Front End Alignment
- Automobile Frame Straightening
- Surface Preparation and Color Matching
- Electrical Servicing
- Drawing Interpretation

---GRADUATION REQUIREMENTS: Requirements vary with school and length of program. See school catalogs for details.

---THINGS TO KNOW: Some shop courses have fees and sometimes students must buy their own tools.

The National Institute for Automotive Service Excellence (NIASE) has a voluntary testing program for qualified auto body and fender repairers. Certificates are awarded; no instruction is involved.

---RELATED PROGRAMS: PROG 295 Metalworking, 631 Apprenticeship Programs.

---DIRECTLY RELATED OCCUPATIONS: DESC 5486 Auto Body Repairers.

ASSOCIATED OCCUPATIONS: DESC 5484 Sheet Metal Workers, 5482 Welders, 3112 Automobile Mechanics.

CIPS: 47.0603

SCHOOLS:

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING, FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED IN AUTOMOTIVE BODY REPAIR.
--- LENGTH OF PROGRAM: THE PROGRAM IS 12 MONTHS LONG.
--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$40 FOR BOOKS AND SUPPLIES, \$950 FOR TOOLS, AND A \$25 LAB FEE.

- - - - - 25004 AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING, FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY AND A CLOCK HOUR CERTIFICATE IN AUTOMOTIVE BODY REPAIR ARE OFFERED.

--- LENGTH OF PROGRAM: THE AUTOMOTIVE BODY REPAIR PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR AUTO BODY I WILL INCLUDE \$275 FOR TOOLS, \$25 FOR BOOKS AND SUPPLIES, AND \$90 FOR MISCELLANEOUS. IN AUTO BODY II COSTS WILL BE \$130 FOR TOOLS.

- - - - - 25005 BEMIDJI AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING, FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: A DEGREE IN AUTOMOTIVE BODY REPAIR IS OFFERED.

--- LENGTH OF PROGRAM: THE AUTOMOTIVE BODY REPAIR PROGRAM IS 18 MONTHS LONG.

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING, FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: A DIPLOMA OF COMPLETION AND A CERTIFICATE OF ATTENDANCE IN AUTOMOTIVE BODY REPAIR ARE OFFERED.

--- LENGTH OF PROGRAM: THE AUTOMOTIVE BODY REPAIR PROGRAM IS 12 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$50 FOR BOOKS, AND \$450 FOR TOOLS AND SUPPLIES.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING, FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: CERTIFICATES AND DEGREES OF OCCUPATIONAL PROFICIENCY ARE OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 22 MONTHS LONG.

- - - - - 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF

AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING, FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 16 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$390 FOR TOOLS, \$85 FOR UNIFORMS, AND \$20 FOR BOOKS AND SUPPLIES.

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING, FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: A CERTIFICATE OR DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS UP TO 92 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$450 FOR BOOKS, SUPPLIES AND EQUIPMENT.

- - - - - 25013 GRANITE FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING, FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION AND A DIPLOMA ARE OFFERED.

--- LENGTH OF PROGRAM: THE AUTOMOTIVE BODY REPAIR PROGRAM IS 18 MONTHS LONG.

- - - - - 25016 JACKSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING, FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: A TECHNICAL SCHOOL DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: AUTOMOTIVE BODY REPAIR IS AN 18 MONTH PROGRAM.

--- SPECIAL COSTS: THE FIRST YEAR COSTS OF TOOLS, BOOKS AND SUPPLIES ARE \$650; \$250 FOR THE SECOND YEAR.

- - - - - 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING, FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS AWARDED.

--- LENGTH OF PROGRAM: AUTOMOTIVE BODY REPAIR IS AN 84 WEEK PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$925 FOR TOOLS AND SUPPLIES.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF

AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING, FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: AUTOMOTIVE BODY REPAIR IS AN 18 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$780 FOR BOOKS AND TOOLS.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING, FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE BOOKS AND SUPPLIES.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING, FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 11 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE \$500 FOR TOOLS, BOOKS AND SUPPLIES.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING, FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: A DIPLOMA OF RECOGNITION IS OFFERED.

--- LENGTH OF PROGRAM: THE AUTOMOTIVE BODY REPAIR PROGRAM REQUIRES FROM 18 TO 24 MONTHS TO COMPLETE.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$20 FOR BOOKS AND SUPPLIES AND \$720 FOR AUTO BODY TOOLS.

- - - - - 25028 THIEF RIVER FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING, FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: DEGREES OF OCCUPATIONAL PROFICIENCY ARE OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM TAKES 18 MONTHS.

- - - - - 25029 WADENA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING,

FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 9 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$350 FOR BOOKS, SUPPLIES AND TOOLS.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING, FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OR A CERTIFICATE IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS, UNIFORMS, AND TOOLS.

- - - - - 25031 WINONA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOTIVE BODY REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR OR REPLACE STRUCTURAL BODY COMPONENTS OF AUTOMOBILES. INSTRUCTION INCLUDES BODY PREPARATION, PAINTING AND FINISHING, FRAME AND UNIBODY REPAIR, SUSPENSION AND STEERING SYSTEMS, AND DAMAGE ANALYSIS.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THIS IS A 10 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$400 FOR TOOLS, \$34 FOR UNIFORMS, AND \$50 FOR BOOKS AND SUPPLIES.

- - - - - 82009 DUNWOODY INDUSTRIAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'AUTOMOBILE BODY REPAIR AND PAINTING' PROGRAM PREPARES STUDENTS FOR CAREERS IN AUTO BODY REPAIR AND PAINTING. COURSES INCLUDE OXYACETYLENE, MIG AND ARC WELDING, METAL REPAIR, FRAME REPAIR, BODY REPAIR, WIRE CIRCUITS, PAINTING, SUSPENSION REPAIR AND ALIGNMENT, AND ESTIMATING.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM CONSISTS OF 18 TRAINING PERIODS, EACH 4 WEEKS LONG, FOR A TOTAL OF 72 WEEKS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$10 SAFETY GLASSES AND GLOVES.

283 INSTRUMENT REPAIR

Programs in instrument repair are designed to prepare people for mechanics and repairer occupations in a variety of fields. Programs usually focus on one of the following areas: electrical, hydraulic, and pneumatic instrument repair; gunsmithing; locksmithing and safe repair; musical instrument repair; audiovisual equipment repair; sports equipment repair; or watch repair. Instruction includes how to diagnose problems and how to clean, repair, assemble, and adjust the instruments or equipment being studied.

Skills in instrument repair are usually learned on the job or through apprenticeship programs. Some community colleges and training schools offer programs in individual skills such as watch repair and gunsmithing. See school catalogs for more information. For information on apprenticeship programs, see PROG 631.

---PROGRAM ADMISSION: Requirements vary by school and repair specialty.

---TYPICAL COURSE WORK: Course work varies by specialization. Instruction is usually individualized and includes working under the supervision of someone who knows the skill involved.

---GRADUATION REQUIREMENTS: Requirements vary by school and repair specialty.

---THINGS TO KNOW: Students are usually required to buy their own tools.

---RELATED PROGRAMS: PROG 631 Apprenticeship Programs, 292 Electricity and Electronics Repair, 298 Precision Production Work, 145 Business Management and Administration (for small business management and ownership).

---DIRECTLY RELATED OCCUPATION: DESC 3184 Jewelers, 3168 Television/Radio Service Technicians.

ASSOCIATED OCCUPATION: DESC 5666 Electrical Technicians.

CIPS: 47.0401	47.0405
47.0402	47.0407
47.0403	47.0408
47.0404	47.0499

SCHOOLS:

- - - - - 25020 PINE TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GUNSMITHING' PROGRAM PREPARES INDIVIDUALS TO REPAIR AND MODIFY FIREARMS ACCORDING TO BLUEPRINTS OR CUSTOMER SPECIFICATIONS, USING SPECIALIZED HAND TOOLS AND MACHINES. INSTRUCTION INCLUDES INSTALLING SUCH PARTS AS METALLIC OR OPTICAL SIGHTS, PISTOL GRIPS, RECOIL PADS, AND DECORATIVE PIECES AND REBORING, REBROACHING, GRINDING, POLISHING, BLUEING, FABRICATING, AND FINISHING WOODEN STOCKS. THE PROGRAM PREPARES INDIVIDUALS TO DESIGN NEW GUNS AND TO CALCULATE DETAILED FIREARM SPECIFICATIONS, SUCH AS BULLET-FLIGHT ARC AND SIGHT POSITION.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: COSTS INCLUDE TOOL KIT AND BOOKS.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CLOCK AND WATCH REPAIR' PROGRAM PREPARES INDIVIDUALS TO MAINTAIN AND REPAIR A VARIETY OF OFFICE MACHINES, SUCH AS TYPEWRITERS, DICTATION MACHINES, CALCULATORS, DATA PROCESSING EQUIPMENT, DUPLICATING MACHINES, AND MAILING MACHINES. INSTRUCTION INCLUDES DIAGNOSTIC TECHNIQUES, THE USE OF TESTING EQUIPMENT, AND THE PRINCIPLES OF MECHANICS, ELECTRICITY, AND ELECTRONICS AS THEY RELATE TO THE REPAIR OF BUSINESS MACHINES.

--- DEGREES OFFERED: DIPLOMAS ARE AWARDED.

--- LENGTH OF PROGRAM: THE CLOCK AND WATCH REPAIR PROGRAM IS 1260 HOURS LONG.

- - - - - 25033 RED WING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'STRING INSTRUMENT REPAIR' PROGRAM PREPARES INDIVIDUALS TO MAINTAIN, REPAIR, AND TUNE ACOUSTIC AND ELECTRIC STRING INSTRUMENTS. INSTRUCTION INCLUDES AMPLIFICATION SYSTEMS OF ELECTRIC INSTRUMENTS, TECHNIQUES OF CLEANING, AND METHODS OF TUNING MUSICAL INSTRUMENTS.

THE 'ELECTRONIC MUSICAL INSTRUMENT REPAIR' PROGRAM PREPARES INDIVIDUALS TO MAINTAIN, REPAIR, AND TUNE ELECTRICAL MUSICAL INSTRUMENTS. INSTRUCTION INCLUDES AMPLIFICATION SYSTEMS OF ELECTRIC INSTRUMENTS; TECHNIQUES OF CLEANING; METHODS OF TUNING MUSICAL INSTRUMENTS; AND THE BASIC FUNDAMENTALS OF ELECTRONICS. THIS BACKGROUND ENABLES STUDENTS TO TROUBLESHOOT, MAINTAIN AND REPAIR MUSICAL ELECTRONIC INSTRUMENTS.

--- DEGREES OFFERED: DEGREES OF OCCUPATIONAL PROFICIENCY ARE AWARDED TO GRADUATES OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THE INSTRUMENT REPAIR PROGRAMS ARE EACH TEN MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE ABOUT \$350 FOR STRING INSTRUMENT REPAIR, AND \$95 FOR ELECTRONIC MUSICAL INSTRUMENT REPAIR.

Industrial mechanics programs intend to prepare students to maintain industrial machinery to prevent costly breakdowns. They also prepare students to quickly diagnose and repair machines when they do break down. Specialty areas may include electrical, electronic, or hydraulic machinery. Training in industrial mechanics is offered through vocational schools and community colleges. Programs range in length from one year certificate programs to two year associate degree programs. Some four year colleges also offer four year bachelor's degree programs in industrial mechanics. Training in skills related to industrial mechanics is also available through apprenticeships (see PROG 631).

---PROGRAM ADMISSION: Requirements vary. See school catalogs for more information. A high school diploma or its equivalent is normally required.

---TYPICAL COURSE WORK: Course work includes reading of technical manuals and applying this knowledge in shop or field training experiences. Practical experience in operating and repairing heavy equipment is usually a major part of the program. Longer programs may offer specialty studies in areas such as machine processes technology, electromechanical technology, industrial hydraulics, and equipment technology. Longer programs also include all or most of the following:

Machine Tools	Machining Processes
Welding	Mechanical Systems
Blueprint Reading	Diagnostic Procedures

Associate degree (two-year) programs and bachelor's degree programs also include course work in areas such as mathematics, communications, and social sciences. See school catalogs for more information.

---GRADUATION REQUIREMENTS: Requirements vary with school, length of program, and specialty. See school catalogs for more information.

---THINGS TO KNOW: Most people learn industrial mechanics skills through three- to four-year apprenticeships. See PROG 631 Apprenticeship Programs.

Information on apprenticeship programs is also available through:
 International Association of Machinists and Aerospace Workers
 Machinists Building
 1300 Connecticut Avenue, NW
 Washington, D.C. 20036

Students may be required to buy tools.

---RELATED PROGRAMS: PROG 295 Metalworking, 278 Gas and Diesel Mechanics, 279 Small Engine Repair, 253 Engineering Technologies, 271 Vehicle and Equipment Operation, 631 Apprenticeship Programs.

---DIRECTLY RELATED OCCUPATIONS: DESC 3142 Millwrights.

ASSOCIATED OCCUPATIONS: DESC 3113 Diesel Mechanics, 5464 Machinists, 5482 Welders.

CIPS: 47.03
 47.05
 47.99

SCHOOLS:

- - - - - 25001 ALBERT LEA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'INDUSTRIAL MAINTENANCE AND REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR AND MAINTAIN INDUSTRIAL MACHINERY AND EQUIPMENT SUCH AS CRANES, PUMPS, ENGINES AND MOTORS, PNEUMATIC TOOLS, CONVEYOR SYSTEMS, PRODUCTION MACHINERY, MARINE DECK MACHINERY, AND STEAM PROPULSION, REFINERY, AND PIPELINE-DISTRIBUTION SYSTEMS. -

--- DEGREES OFFERED: A DIPLOMA IN INDUSTRIAL MAINTENANCE IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 20 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$200 FOR THE FIRST YEAR AND \$100 FOR THE SECOND YEAR.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HEAVY EQUIPMENT MAINTENANCE' PROGRAM TRAINS INDIVIDUALS IN THE FIELD MAINTENANCE OF HEAVY EQUIPMENT, AND IN GENERAL MAINTENANCE AND OVERHAUL OF HEAVY EQUIPMENT. INSTRUCTION INCLUDES INSPECTION, MAINTENANCE, AND REPAIR OF TRACKS, WHEELS, BRAKES, OPERATING CONTROLS, PNEUMATIC AND HYDRAULIC SYSTEMS, ELECTRICAL CIRCUITRY, ENGINES, AND TECHNIQUES OF WELDING AND BRAZING.

THE 'INDUSTRIAL ENGINES MECHANIC' PROGRAM PREPARES INDIVIDUALS TO MAINTAIN AND REPAIR GAS AND DIESEL ENGINES IN CONSTRUCTION AND INDUSTRIAL FIELDS. INSTRUCTION INCLUDES GENERATORS, STATIONARY POWER SUPPLIES, PUMPS AND COMPRESSORS; TROUBLE-SHOOTING; AND REBUILDING PROCEDURES.

--- DEGREES OFFERED: A CERTIFICATE AND A DEGREE OF OCCUPATIONAL PROFICIENCY ARE OFFERED.

--- LENGTH OF PROGRAM: THE INDUSTRIAL ENGINES PROGRAM IS 11 MONTHS LONG. THE HEAVY EQUIPMENT MAINTENANCE PROGRAM IS 22 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$1100 FOR BOOKS, TOOLS, AND SAFETY GLASSES.

- - - - - 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HEAVY EQUIPMENT MAINTENANCE' PROGRAM TRAINS INDIVIDUALS IN THE FIELD MAINTENANCE OF HEAVY EQUIPMENT, AND IN GENERAL MAINTENANCE AND OVERHAUL OF HEAVY EQUIPMENT. INSTRUCTION INCLUDES INSPECTION, MAINTENANCE, AND REPAIR OF TRACKS, WHEELS, BRAKES, OPERATING CONTROLS, PNEUMATIC AND HYDRAULIC SYSTEMS, ELECTRICAL CIRCUITRY, ENGINES, AND TECHNIQUES OF WELDING AND BRAZING.

THE 'STATIONARY ENGINEERING' PROGRAM PREPARES INDIVIDUALS TO INSTALL, OPERATE, AND MAINTAIN LARGE POWER SOURCES FOR SUCH PURPOSES AS GENERATING ELECTRICITY, PUMPING, AND HEATING.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THESE ARE 9 MONTH PROGRAMS.

- - - - - 25011 EVELETH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MILLWRIGHT' PROGRAM PREPARES INDIVIDUALS TO FABRICATE AND REPAIR INDUSTRIAL MACHINERY. INSTRUCTION INCLUDES LAYOUT; SEQUENCE OF OPERATIONS; SET UP OPERATIONS; REPAIR OF MACHINERY AND EQUIPMENT; DESIGN AND CONSTRUCTION OF RIGGING AND FIXTURES; AND THE POSITIONING, ALIGNING, FITTING, AND WELDING OF COMPONENTS AND SYSTEMS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE MILLWRIGHT PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: COSTS OF BOOKS, SUPPLIES AND EQUIPMENT ARE \$154.

- - - - - 25014 HIBBING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HEAVY EQUIPMENT MAINTENANCE' PROGRAM TRAINS INDIVIDUALS IN THE FIELD MAINTENANCE OF HEAVY EQUIPMENT, AND IN GENERAL MAINTENANCE AND OVERHAUL OF HEAVY EQUIPMENT. INSTRUCTION INCLUDES INSPECTION, MAINTENANCE, AND REPAIR OF TRACKS, WHEELS, BRAKES, OPERATING CONTROLS, PNEUMATIC AND HYDRAULIC SYSTEMS, ELECTRICAL CIRCUITRY, ENGINES, AND TECHNIQUES OF WELDING AND BRAZING.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: COSTS ARE \$75 FOR BOOKS AND SUPPLIES.

- - - - - 25026 STAPLES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HEAVY EQUIPMENT MAINTENANCE' PROGRAM TRAINS INDIVIDUALS IN THE FIELD MAINTENANCE OF HEAVY EQUIPMENT, AND IN GENERAL MAINTENANCE AND OVERHAUL OF HEAVY EQUIPMENT. INSTRUCTION INCLUDES INSPECTION, MAINTENANCE, AND REPAIR OF TRACKS, WHEELS, BRAKES, OPERATING CONTROLS, PNEUMATIC AND HYDRAULIC SYSTEMS, ELECTRICAL CIRCUITRY, ENGINES, AND TECHNIQUES OF WELDING AND BRAZING.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'STATIONARY ENGINEERING' PROGRAM PREPARES INDIVIDUALS TO INSTALL, OPERATE, AND MAINTAIN LARGE POWER SOURCES FOR SUCH PURPOSES AS GENERATING ELECTRICITY, PUMPING, AND HEATING.

THE 'AUTOMATED PACKAGING EQUIPMENT MAINTENANCE' PROGRAM PREPARES INDIVIDUALS TO OPERATE, MAINTAIN AND TROUBLESHOOT COMPLEX AUTO-MATIC PACKAGING EQUIPMENT. INSTRUCTION INCLUDES MECHANICAL, HYDRAULIC, PNEUMATIC, ELECTRICAL AND ELECTRONIC DEVICES ON A COMPLETELY ASSEMBLED PACKAGING MACHINE; ACTUALIZING, MANIPULATING AND SENSING COMPONENT PARTS; ELECTRONIC ACTUATING DEVICES, MECHANICAL ACTUATING DEVICES, COMPUTER PROGRAMMING FOR AUTOMATED CONTROL; AND THE OVERALL MECHANICAL CONSTRUCTION OF AUTOMATED PACKAGING COMPONENTS.

--- DEGREES OFFERED: A DIPLOMA OF RECOGNITION IS OFFERED.

--- LENGTH OF PROGRAM: THESE PROGRAMS VARY FROM 6 TO 24 MONTHS TO COMPLETE DEPENDING UPON THE STUDENT'S EMPLOYMENT OBJECTIVES.

--- SPECIAL COSTS: PROGRAM RELATED COSTS ARE \$76 FOR AUTOMATED PACKAGING MACHINERY.

- - - - - 25033 RED WING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'INDUSTRIAL MAINTENANCE AND REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR AND MAINTAIN INDUSTRIAL MACHINERY AND EQUIPMENT SUCH AS CRANES, PUMPS, ENGINES AND MOTORS, PNEUMATIC TOOLS, CONVEYOR SYSTEMS, PRODUCTION MACHINERY, MARINE DECK MACHINERY, AND STEAM PROPULSION, REFINERY, AND PIPELINE-DISTRIBUTION SYSTEMS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

- - - - - 26073 ST. CLOUD STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE DEPARTMENT OF INDUSTRIAL STUDIES ASSISTS THE INDIVIDUAL IN THE DEVELOPMENT OF CONCEPTS, KNOWLEDGE, AND APPRECIATION FOR INDUSTRY AND TECHNOLOGY WITHIN SOCIETY. THE FUNCTIONS OF THE DEPARTMENT ARE TO: (1) PREPARE INDUSTRIAL ARTS TEACHERS FOR INSTRUCTION AT THE 5-12 GRADE LEVELS, (2) PREPARE TEACHERS FOR INSTRUCTION IN VOCATIONAL/TECHNICAL EDUCATION, (3) PREPARE TECHNOLOGICALLY LITERATE INDIVIDUALS TO ENTER A WIDE VARIETY OF CAREERS THAT RELATE DIRECTLY TO INDUSTRY AND TECHNOLOGY, AND (4) OFFER OPPORTUNITY FOR GRADUATE STUDY IN

INDUSTRIAL EDUCATION.

--- DEGREES OFFERED: DEGREES INCLUDE AN ASSOCIATE IN SCIENCE DEGREE IN VOCATIONAL EDUCATION, A BACHELOR OF SCIENCE DEGREE IN INDUSTRIAL STUDIES (INDUSTRIAL ARTS EDUCATION OR INDUSTRIAL/TECHNICAL), A BACHELOR OF SCIENCE DEGREE IN VOCATIONAL TECHNICAL EDUCATION, A BACHELOR OF ELECTIVE STUDIES DEGREE, AND A MASTER OF SCIENCE DEGREE IN INDUSTRIAL EDUCATION.

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: 'POWDER/METAL/METALLURGICAL TECHNOLOGY' IS A JOINT PROGRAM WITH HENNEPIN TECHNICAL CENTERS. COURSES IN COMMUNICATION, MATHEMATICS, PSYCHOLOGY, ECONOMICS, SPEECH, CHEMISTRY, AND PHYSICS WILL BE TAKEN AT NORTH HENNEPIN. THE TECHNICAL COURSES IN POWDER METALS ARE TAKEN AT THE AVTI.

--- DEGREES OFFERED: UPON COMPLETION OF THIS PROGRAM, STUDENTS RECEIVE AN ASSOCIATE IN APPLIED SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM. ONE YEAR IS SPENT AT NORTH HENNEPIN AND ONE YEAR AT THE HENNEPIN TECHNICAL CENTERS.

Construction trades programs are designed to prepare people to build, maintain, and repair buildings, highways, airports, and other structures, using materials such as metal, wood, stone, brick, glass, concrete, and composition substances. Some programs also emphasize real estate management and development; others focus on aspects such as writing job specifications, cost estimating, or supervising construction for architects, contractors, and engineers. Some programs intend to provide skills for managing the production and marketing of construction products.

Many of these skills may be learned in apprenticeship programs. See PROG 631 Apprenticeship Programs. Community colleges and four-year colleges and universities offer programs that vary in length from one to five years, depending on specialty and emphasis.

---PROGRAM ADMISSION: Requirements vary. See school catalogs for more information. Four-year colleges and universities usually require a high school diploma or its equivalent.

---TYPICAL COURSE WORK: Construction trades programs usually include on-the-job training at construction sites. In addition to training in individual skills, longer programs also usually include most or all of the following:

Construction Materials	Construction Safety
and Concepts	Blueprint Reading
Construction Estimating	Surveying
Technical Report Writing	Drafting
Mathematics	

Associate degree (two-year) programs and bachelor's degree (four- or five-year) programs usually include courses in other academic areas, such as business administration, accounting, psychology, and English.

---GRADUATION REQUIREMENTS: Requirements vary with school, program length, and emphasis. See school catalogs for specific requirements.

---THINGS TO KNOW: Many programs require students to purchase tools.

---RELATED PROGRAMS: PROG 145 Business Management and Administration, 631 Apprenticeship Programs, 253 Engineering Technologies, 291 Drafting.

---DIRECTLY RELATED OCCUPATIONS: DESC 4264 Bricklayers, 4254 Carpenters, 4246 Cement Masons, 5626 Electricians, 4276 Floor Layers, 4216 Glaziers, 5482 Welders 4242 Painters, 4243 Plasterers, 4241 Drywall Installers, 4274 Plumbers and Pipefitters, 4278 Roofers.

ASSOCIATED OCCUPATIONS: DESC 4286 Construction Laborers, 6152 Bulldozer Operators, 1147 Contractors.

CIPS: 46.

SCHOOLS:

- - - - - 25001 ALBERT LEA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CONSTRUCTION ELECTRICIAN' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, AND REPAIR ELECTRICALLY ENERGIZED SYSTEMS SUCH AS RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL ELECTRIC

POWER WIRING, AND D.C. AND A.C. MOTORS, CONTROLS, AND ELECTRICAL DISTRIBUTION PANELS. INSTRUCTION INCLUDES THE USE OF TEST EQUIPMENT.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 20 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$225 FOR THE FIRST YEAR, \$100 FOR THE SECOND YEAR.

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

--- DEGREES OFFERED: A DIPLOMA IN CARPENTRY IS OFFERED.

--- LENGTH OF PROGRAM: THE CARPENTRY PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$170 FOR BOOKS, \$6 FOR SAFETY GLASSES AND \$450 FOR TOOLS.

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CONSTRUCTION ELECTRICIAN' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, AND REPAIR ELECTRICALLY ENERGIZED SYSTEMS SUCH AS RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL ELECTRIC POWER WIRING, AND D.C. AND A.C. MOTORS, CONTROLS, AND ELECTRICAL DISTRIBUTION PANELS. INSTRUCTION INCLUDES THE USE OF TEST EQUIPMENT.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED IN THIS PROGRAM.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 19 MONTHS LONG.

--- SPECIAL COSTS: COSTS FOR THE CONSTRUCTION ELECTRICIAN PROGRAM ARE \$250 FOR BOOKS, \$125 FOR TOOLS AND A LAB DEPOSIT OF \$25.

- - - - - 25004 AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY AND A CLOCK HOUR CERTIFICATE IN CARPENTRY ARE OFFERED.

--- LENGTH OF PROGRAM: THE CARPENTRY PROGRAM IS 18 MONTHS LONG.

- - - - - 25005 BEMIDJI AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

--- DEGREES OFFERED: A DEGREE IN CARPENTRY IS OFFERED.

--- LENGTH OF PROGRAM: THE CARPENTRY PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$275 FOR TOOLS.

- - - - - 25007 CANBY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CONSTRUCTION ELECTRICIAN' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, AND REPAIR ELECTRICALLY ENERGIZED SYSTEMS SUCH AS RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL ELECTRIC POWER WIRING, AND D.C. AND A.C. MOTORS, CONTROLS, AND ELECTRICAL DISTRIBUTION PANELS. INSTRUCTION INCLUDES THE USE OF TEST EQUIPMENT.

--- DEGREES OFFERED: A DIPLOMA OF GRADUATION IN CONSTRUCTION ELECTRICIAN IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 22 MONTHS LONG.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRICAL LINework' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, AND REPAIR RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL ELECTRICAL LINES AND THE POWER LINES THAT TRANSMIT ELECTRICITY FROM THE SOURCE OF GENERATION TO ITS PLACE OF CONSUMPTION, BOTH ABOVE AND BELOW GROUND LEVEL.

--- DEGREES OFFERED: A CERTIFICATE AND A DEGREE OF OCCUPATIONAL PROFICIENCY ARE OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 22 MONTHS LONG.

- - - - - 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CONSTRUCTION ELECTRICIAN' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, AND REPAIR ELECTRICALLY ENERGIZED SYSTEMS SUCH AS RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL ELECTRIC POWER WIRING, AND D.C. AND A.C. MOTORS, CONTROLS, AND ELECTRICAL DISTRIBUTION PANELS. INSTRUCTION INCLUDES THE USE OF TEST EQUIPMENT.

THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE CARPENTRY PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$175 FOR TOOLS, \$70 FOR BOOKS, \$20 FOR SUPPLIES, AND \$130 FOR FIELD TRIPS.

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

THE 'CONSTRUCTION ELECTRICIAN' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, AND REPAIR ELECTRICALLY ENERGIZED SYSTEMS SUCH AS RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL ELECTRIC POWER WIRING, AND D.C. AND A.C. MOTORS, CONTROLS, AND ELECTRICAL DISTRIBUTION PANELS. INSTRUCTION INCLUDES THE USE OF TEST EQUIPMENT.

--- DEGREES OFFERED: A CERTIFICATE OR DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE CARPENTRY PROGRAM IS 72 WEEKS LONG, WHILE THE CONSTRUCTION ELECTRICIAN IS 76 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$100 FOR EACH PROGRAM.

- - - - - 25011 EVELETH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE CARPENTRY PROGRAM IS 18 MONTHS LONG.

- - - - - 25012 FARIBAULT AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

- - - - - 25016 JACKSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

THE 'CONSTRUCTION ELECTRICIAN' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, AND REPAIR ELECTRICALLY ENERGIZED SYSTEMS SUCH AS RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL ELECTRIC POWER WIRING, AND D.C. AND A.C. MOTORS, CONTROLS, AND ELECTRICAL-DISTRIBUTION PANELS.

THE 'PLUMBING' PROGRAM PREPARES INDIVIDUALS TO ASSEMBLE, INSTALL, AND REPAIR PIPES, FITTINGS, AND FIXTURES OF HEATING, WATER, AND DRAINAGE SYSTEMS, ACCORDING TO SPECIFICATIONS AND PLUMBING CODES. THE 'ELECTRICAL LINEWORK' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, AND REPAIR RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL ELECTRICAL LINES AND THE POWER LINES THAT TRANSMIT ELECTRICITY FROM THE SOURCE OF GENERATION TO ITS PLACE OF CONSUMPTION, BOTH ABOVE AND BELOW GROUND LEVEL.

--- DEGREES OFFERED: A TECHNICAL SCHOOL DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: CARPENTRY AND CONSTRUCTION ELECTRICIAN ARE 22 MONTH PROGRAMS. PLUMBING IS AN 11 MONTH PROGRAM.

--- SPECIAL COSTS: THE COST OF TOOLS, BOOKS AND SUPPLIES FOR EACH PROGRAM ARE: CARPENTRY - \$450; CONSTRUCTION ELECTRICIAN - \$450; PLUMBING - \$250.

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CONSTRUCTION ELECTRICIAN' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, AND REPAIR ELECTRICALLY ENERGIZED SYSTEMS SUCH AS RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL ELECTRIC POWER WIRING, AND D.C. AND A.C. MOTORS, CONTROLS, AND ELECTRICAL DISTRIBUTION PANELS. INSTRUCTION INCLUDES THE USE OF TEST EQUIPMENT.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED TO STUDENTS WHO COMPLETE THIS PROGRAM.

--- LENGTH OF PROGRAM: THE CONSTRUCTION ELECTRICIAN PROGRAM TAKES 7 QUARTERS TO COMPLETE.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR CONSTRUCTION ELECTRICIAN WILL INCLUDE ABOUT \$160 FOR BOOKS, \$12 FOR TOOLS, AND \$5 FOR SAFETY GLASSES.

- - - - - 25019 MOORHEAD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

THE 'CONSTRUCTION ELECTRICIAN' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, AND REPAIR ELECTRICALLY ENERGIZED SYSTEMS SUCH AS RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL ELECTRIC POWER WIRING, AND D.C. AND A.C. MOTORS, CONTROLS, AND ELECTRICAL-DISTRIBUTION PANELS. INSTRUCTION INCLUDES THE USE OF TEST EQUIPMENT.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: CARPENTRY IS AN 18 MONTH PROGRAM, AND CONSTRUCTION ELECTRICIAN TAKES 20 MONTHS TO COMPLETE.

- - - - - 25021 PIPESTONE AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

--- DEGREES OFFERED: STUDENTS WHO COMPLETE THIS PROGRAM ARE AWARDED DEGREES OF OCCUPATIONAL PROFICIENCY.

--- LENGTH OF PROGRAM: CARPENTRY IS A 22 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE ABOUT \$325 FOR CARPENTRY.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: CARPENTRY TAKES 9 MONTHS TO COMPLETE.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE TOOLS, SUPPLIES, AND EQUIPMENT.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CONSTRUCTION ELECTRICIAN' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, AND REPAIR ELECTRICALLY ENERGIZED SYSTEMS SUCH AS RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL ELECTRIC POWER WIRING, AND D.C. AND A.C. MOTORS, CONTROLS, AND ELECTRICAL DISTRIBUTION PANELS. INSTRUCTION INCLUDES THE USE OF TEST EQUIPMENT.

THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

THE 'PLUMBING' PROGRAM PREPARES INDIVIDUALS TO ASSEMBLE, INSTALL, AND REPAIR PIPES, FITTINGS, AND FIXTURES OF HEATING, WATER, AND DRAINAGE SYSTEMS, ACCORDING TO SPECIFICATIONS AND PLUMBING CODES.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE PLUMBING PROGRAM IS 9 MONTHS LONG. THE TWO OTHER PROGRAMS ARE 18 MONTHS LONG.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

THE 'CONSTRUCTION ELECTRICIAN' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, AND REPAIR ELECTRICALLY ENERGIZED SYSTEMS SUCH AS RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL ELECTRIC POWER WIRING, AND D.C. AND A.C. MOTORS, CONTROLS, AND ELECTRICAL DISTRIBUTION PANELS. INSTRUCTION INCLUDES THE USE OF TEST EQUIPMENT.

THE 'PAINTING AND DECORATING' PROGRAM PREPARES INDIVIDUALS TO FINISH EXTERIOR AND INTERIOR SURFACES BY APPLYING PROTECTIVE OR DECORATIVE COATING

SCRAPING, BURNING, OR SANDING SURFACES; MAKING, MIXING, AND MATCHING COLORS, APPLYING COATING WITH BRUSH, ROLLER, OR SPRAY GUN; AND CUTTING, PASTING, AND HANGING WALLPAPER.

THE 'PLUMBING' PROGRAM PREPARES INDIVIDUALS TO ASSEMBLE, INSTALL, AND REPAIR PIPES, FITTINGS, AND FIXTURES OF HEATING, WATER, AND DRAINAGE SYSTEMS, ACCORDING TO SPECIFICATIONS AND PLUMBING CODES.

THE 'PIPEFITTING & STEAMFITTING' PROGRAM PREPARES INDIVIDUALS TO LAYOUT, FABRICATE, ASSEMBLE, INSTALL, AND MAINTAIN PIPING AND PIPING SYSTEMS, FIXTURES, AND EQUIPMENT FOR STEAM, HOT WATER, HEATING, COOLING, LUBRICATING, SPRINKLING, AND INDUSTRIAL PROCESSING SYSTEMS. THE BASIS OF SYSTEMS OPERATION AND THE STUDY OF BUILDING PLANS OR WORKING DRAWINGS IS INCLUDED IN THE PROGRAM.

--- DEGREES OFFERED: DIPLOMAS ARE AWARDED.

--- LENGTH OF PROGRAM: THE CONSTRUCTION ELECTRICIAN PROGRAM IS 18 MONTHS LONG. THE CARPENTRY PROGRAM IS 11 MONTHS LONG AND STARTS IN JUNE. ALL OTHER PROGRAMS ARE 9 MONTHS LONG. ALL PROGRAMS START IN SEPTEMBER. THE CONSTRUCTION ELECTRICIAN PROGRAM ALSO STARTS IN DECEMBER AND MARCH.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE AS FOLLOWS: \$300 FOR ELECTRICIAN, \$90 FOR PIPEFITTING, \$120 FOR PLUMBING, \$250 FOR PAINTING, AND \$525 FOR CARPENTRY.

- - - - - 25026 STAPLES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'WATER WELL DRILLING' PROGRAM PREPARES INDIVIDUALS TO DRILL WATER WELLS AND INSTALL AND MAINTAIN WATER SYSTEMS EQUIPMENT. INSTRUCTION INCLUDES DRILLING, TRANSMISSION AND PUMPING OF WATER, AND MAINTENANCE AND REPAIR OF EQUIPMENT.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

THE 'BRICK, BLOCK AND STONE MASONRY' PROGRAM PREPARES INDIVIDUALS TO LAY BRICKS AND/OR BLOCKS. INSTRUCTION INCLUDES LAYING OUT AND/OR SPACING BONDS; DETERMINING VERTICAL AND HORIZONTAL ALIGNMENT OF COURSES USING GAUGES, PLUMB-BOBS, AND LEVELS; AND CUTTING, NOTCHING, AND SHAPING BLOCKS, BRICKS, TERRA-COTTA VENEER, GLASS AND STONE TO CONSTRUCT OR REPAIR WALLS, PARTITIONS, ARCHES, SEWERS, AND FIREPLACES.

THE 'PAINTING AND DECORATING' PROGRAM PREPARES INDIVIDUALS TO FINISH EXTERIOR AND INTERIOR SURFACES BY APPLYING PROTECTIVE OR DECORATIVE COATING MATERIALS, SUCH AS PAINT, LACQUER, AND WALLPAPER. INSTRUCTION INCLUDES SCRAPING, BURNING, OR SANDING SURFACES; MAKING, MIXING, AND MATCHING PAINT COLORS, APPLYING COATING WITH BRUSH, ROLLER, OR SPRAY GUN; AND CUTTING, PASTING, AND HANGING WALLPAPER.

--- DEGREES OFFERED: DIPLOMAS OF RECOGNITION ARE OFFERED IN EACH OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THE CARPENTRY PROGRAM IS 21 MONTHS. THE BRICK, BLOCK AND STONE MASONRY PROGRAM IS 10 MONTHS. THE PAINTING AND DECORATING PROGRAM IS 11 MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS ARE AS FOLLOWS: \$660 FOR CARPENTRY; \$75 FOR BRICK, BLOCK AND STONE; \$160 FOR PAINTING AND DECORATING.

- - - - - 25028 THIEF RIVER FALLS AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

--- DEGREES OFFERED: DEGREES OF OCCUPATIONAL PROFICIENCY ARE AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

- - - - - 25029 WADENA AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'CONSTRUCTION ELECTRICIAN' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, AND REPAIR ELECTRICALLY ENERGIZED SYSTEMS SUCH AS RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL ELECTRIC POWER WIRING, AND D.C. AND A.C. MOTORS, CONTROLS, AND ELECTRICAL DISTRIBUTION PANELS. INSTRUCTION INCLUDES THE USE OF TEST EQUIPMENT. THE 'PLUMBING' PROGRAM PREPARES INDIVIDUALS TO ASSEMBLE, INSTALL, AND REPAIR PIPES, FITTINGS, AND FIXTURES OF HEATING, WATER, AND DRAINAGE SYSTEMS, ACCORDING TO SPECIFICATIONS AND PLUMBING CODES. THE 'ELECTRICAL LINework' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, AND REPAIR RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL ELECTRICAL LINES AND THE POWER LINES THAT TRANSMIT ELECTRICITY FROM THE SOURCE OF GENERATION TO ITS PLACE OF CONSUMPTION, BOTH ABOVE AND BELOW GROUND LEVEL.

--- DEGREES OFFERED: DIPLOMAS ARE AWARDED.

--- LENGTH OF PROGRAM: THE CONSTRUCTION ELECTRICIAN PROGRAM TAKES 18 MONTHS. THE PLUMBING PROGRAM TAKES 11 MONTHS. THE ELECTRICAL LINE WORKER PROGRAM IS 10 MONTHS. EARLY APPLICATION, BY AUGUST 29TH, IS REQUIRED FOR THE LINeworkER PROGRAM. THE PROGRAM IS USUALLY FILLED BY MID-SEPTEMBER.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$350 FOR CONSTRUCTION ELECTRICIAN I, \$155 FOR CONSTRUCTION ELECTRICIAN II, \$378 FOR PLUMBING AND \$430 FOR ELECTRICAL LINE WORKER FOR BOOKS, SUPPLIES AND TOOLS.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OR A CERTIFICATE IS AWARDED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$210 FOR BOOKS (ALL USABLE BOOKS ARE BOUGHT BACK AT 70 PERCENT OF PAID PRICE) AND \$350 FOR TOOLS.

- - - - - 25031 WINONA AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: CARPENTRY IS A 19 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$260 FOR TOOLS, AND \$95 FOR BOOKS AND SUPPLIES.

- - - - - 25032 EAST GRAND FORKS AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'CARPENTRY' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT, INSTALL, AND REMODEL RESIDENTIAL AND COMMERCIAL STRUCTURES, USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES COMMON SYSTEMS OF FRAMING, CONSTRUCTION MATERIALS, ESTIMATING, AND BLUEPRINT READING.

--- LENGTH OF PROGRAM: THIS PROGRAM IS NINE MONTHS LONG.

--- SPECIAL COSTS: COSTS ARE \$416 FOR TOOLS, BOOKS, AND SUPPLIES.

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE
--- OBJECTIVES OF THE PROGRAM: THE 'BUILDING INSPECTION TECHNOLOGY' PROGRAM SERVES TO UPGRADE THE COMPETENCIES OF THOSE ALREADY EMPLOYED IN THE FIELD AND PREPARES OTHERS FOR SUCH EMPLOYMENT. COURSES ARE REQUIRED IN WRITING, ALGEBRA, BUILDING TECHNOLOGY, VARIOUS KINDS OF INSPECTION, BUILDING CODES, PLAN READING, MANAGEMENT, SUPERVISION, HUMAN RELATIONS, SOCIOLOGY, URBAN POLITICS, AND URBAN PLANNING.

THE 'CONSTRUCTION SUPERVISION' PROGRAM IS OFFERED JOINTLY WITH HENNEPIN TECHNICAL CENTERS. COURSES IN BUSINESS, BUILDING, TECHNOLOGY PLAN READING, AND ESTIMATING ARE OFFERED AT NORTH HENNEPIN. THE TECHNICAL COURSES IN CARPENTRY, PLUMBING, BRICKLAYING, SHEETMETAL, PAINTING, AND DECORATING ARE TAKEN AT THE TECHNICAL CENTERS.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THESE ARE TWO YEAR PROGRAMS. IN THE CONSTRUCTION SUPERVISION PROGRAM, ONE YEAR IS SPENT AT NORTH HENNEPIN AND ONE YEAR AT HENNEPIN TECHNICAL CENTERS.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE
--- OBJECTIVES OF THE PROGRAM: THE 'CONSTRUCTION MANAGEMENT' PROGRAM PREPARES PEOPLE ALREADY SKILLED IN THE CONSTRUCTION TRADES FOR SUPERVISORY/MANAGERIAL POSITIONS IN THE CONSTRUCTION INDUSTRY AND IN THOSE INDUSTRIES WHICH SUPPLY AND/OR PROVIDE RELATED SERVICES TO CONSTRUCTION. THE 'BUILDING INSPECTION' PROGRAM AND 'CERTIFICATE' PROGRAM IS DESIGNED TO UPGRADE THE COMPETENCIES OF PRESENT BUILDING INSPECTORS, TO PREPARE PERSONS FOR STATE EXAMINATION AND CERTIFICATION AS BUILDING OFFICIALS, TO INTRODUCE PERSONS TO A CAREER IN BUILDING INSPECTION AND TO PROVIDE TRAINING TO SATISFY THE CONTINUING EDUCATION REQUIREMENTS FOR BUILDING INSPECTORS.
--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED.
--- LENGTH OF PROGRAM: THE CONSTRUCTION MANAGEMENT PROGRAM IS TWO YEARS. THE BUILDING INSPECTION PROGRAM IS ONE OR TWO YEARS.

- - - - - 82009 DUNWOODY INDUSTRIAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRICAL' PROGRAM PROVIDES STUDENTS WITH A GENERAL FOUNDATION AND BACKGROUND FOR CAREERS IN ELECTRICAL CONSTRUCTION, INSTALLATION, OPERATION, AND MAINTENANCE OCCUPATIONS. STUDENTS LEARN THE PRINCIPLES AND CONSTRUCTION OF MOTOR CONTROL EQUIPMENT. INCLUDED ARE 5 MONTHS OF ELECTRONIC THEORY AND APPLICATION. STUDENTS ALSO LEARN THE WIRING METHODS AND CODES USED IN RESIDENTIAL, COMMERCIAL AND INDUSTRIAL WIRING. THE 'SHEET METAL' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR CAREERS IN THE SHEET METAL TRADE. THEY DESIGN AND FABRICATE A WIDE VARIETY OF SHEET METAL PRODUCTS. RELATED CLASSROOM STUDIES AND SHOP COURSES ARE TAKEN.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED FOR BOTH OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE EACH 18 TRAINING PERIODS, 4 WEEKS LONG FOR A TOTAL OF 72 WEEKS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE SAFETY GLASSES.

Woodworking programs intend to prepare students to cut, assemble, finish, and repair products made of wood. Usually these programs prepare students to make cabinets or furniture. Training is offered through community colleges, vocational technical schools, apprenticeship programs, and on-the-job experience, working with an experienced cabinetmaker. Usually people who wish to become cabinetmakers complete a 3- to 4-year apprenticeship.

---PROGRAM ADMISSION: A background in elementary algebra, geometry, drafting, art, and woodshop is helpful. Those interested in becoming cabinetmakers must have at least a high school education.

---TYPICAL COURSE WORK: Includes classroom lectures and discussion plus hands-on experience in the shop. In the classroom, students learn how to design cabinets or furniture. Drafting courses teach sketching, geometric designs, and dimension standards. Students learn the theories and uses of hand and power tools and blueprint reading. In the shop, students learn to use hand woodworking tools and equipment. They do hand sanding, gluing, and fitting of some parts. They learn to assemble fixtures according to blueprints. They also learn to operate molders, jointers, tenoners, mortisers, planers, sanders, and other power machines. Courses may include:

- Basic Woodworking
- Industrial Math
- Industrial Drawing
- Elementary Cabinet and Furniture Making
- Intermediate and Advanced Cabinetmaking

---GRADUATION REQUIREMENTS: Requirements vary. See school catalogs for specific requirements.

---THINGS TO KNOW: To become an apprentice, a person should contact a craft union, the State Bureau of Labor and Industries, or the Federal Bureau of Apprenticeship and Training. (For more information see PROG 631.)

Apprentices who complete the program usually find work as journey workers with the firm in which they trained or with another company. Those who learn these skills through on-the-job training may find it harder to get jobs with companies, but may go into business themselves, provided they have the necessary skills, business knowledge, tools, and capital.

---RELATED PROGRAMS: PROG 288 Construction Trades, 631 Apprenticeship Programs, 291 Drafting.

---DIRECTLY RELATED OCCUPATIONS: DESC 4586 Cabinetmakers, 4582 Woodworking Machine Operators.

ASSOCIATED OCCUPATIONS: DESC 4254 Carpenters.

CIPS: 48.07

SCHOOLS:

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'WOOD FURNITURE FINISHING' PROGRAM PREPARES INDIVIDUALS TO REPAIR AND REFINISH WOOD FURNITURE. INSTRUCTION

INCLUDES STRIPPING, COLOR MATCHING TECHNIQUES, AND REPLACING SMALL COMPONENT PARTS.

--- DEGREES OFFERED: A CERTIFICATE AND A DEGREE OF OCCUPATIONAL PROFICIENCY ARE OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 11 MONTHS LONG.

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MILLWORK AND CABINETMAKING' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE CONSTRUCTION OF SUCH ARTICLES AS KITCHEN CABINETS, STORE FIXTURES, OFFICE PIECES, WINDOW FRAMES, MOLDINGS, TRIM, AND PANELS. INSTRUCTION INCLUDES CUTTING, SHAPING, ASSEMBLING, AND REFINISHING ARTICLES; INSTALLING HINGES, CATCHES, DRAWER PULLS, AND OTHER HARDWARE; AND PLANNING AND DRAFTING LAYOUTS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED TO STUDENTS WHO COMPLETE THIS PROGRAM.

--- LENGTH OF PROGRAM: THE MILLWORK AND CABINET MAKING PROGRAM IS A 5 QUARTER PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$25 FOR BOOKS, \$50 FOR TOOLS, AND \$4 FOR SAFETY GLASSES.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MILLWORK AND CABINETMAKING' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE CONSTRUCTION OF SUCH ARTICLES AS KITCHEN CABINETS, STORE FIXTURES, OFFICE PIECES, WINDOW FRAMES, MOLDINGS, TRIM, AND PANELS. INSTRUCTION INCLUDES CUTTING, SHAPING, ASSEMBLING, AND REFINISHING ARTICLES; INSTALLING HINGES, CATCHES, DRAWER PULLS, AND OTHER HARDWARE; AND PLANNING AND DRAFTING LAYOUTS.

--- DEGREES OFFERED: DIPLOMAS ARE AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 11 MONTHS LONG AND STARTS IN SEPTEMBER.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE \$150 FOR CABINETMAKING.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'MILLWORK AND CABINETMAKING' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE CONSTRUCTION OF SUCH ARTICLES AS KITCHEN CABINETS, STORE FIXTURES, OFFICE PIECES, WINDOW FRAMES, MOLDINGS, TRIM, AND PANELS. INSTRUCTION INCLUDES CUTTING, SHAPING, ASSEMBLING, AND REFINISHING ARTICLES; INSTALLING HINGES, CATCHES, DRAWER PULLS, AND OTHER HARDWARE; AND PLANNING AND DRAFTING LAYOUTS.

--- DEGREES OFFERED: A DIPLOMA OF RECOGNITION IS OFFERED IN THIS PROGRAM.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES 18 MONTHS TO COMPLETE.

--- SPECIAL COSTS: PROGRAM RELATED COSTS ARE \$140.

291 DRAFTING

Drafting programs intend to provide people with skills needed to prepare detailed drawings based on rough sketches, specifications, and calculations made by scientists, engineers, architects, and designers. Training includes drawing and design principles and the use of drafting machines, calculators, compasses, protractors, templates, and other drafting devices. Students may specialize in mechanical, electrical, aeronautical, structural, or architectural drafting. Most drafting programs, ranging in length from nine-month certificate programs to two-year associate degree programs, are available at community colleges, vocational technical schools, and private trade schools.

---PROGRAM ADMISSION: A high school education with a math background is usually recommended for admission to drafting programs.

---TYPICAL COURSE WORK: Courses are usually taught using lectures and many hours of practice in drafting laboratories. Most drafting programs include the following courses:

Mechanical Drafting	Computer Graphics
Mathematics	Product Design
Blueprint Reading	Structural Drafting
Surveying	Construction Materials
Geometric Construction	Technical Illustration
Computer-aided Drafting	

Longer programs may include courses emphasizing communication skills, such as English composition, technical reading, and report writing.

---GRADUATION REQUIREMENTS: Requirements vary with school and length of program. See college catalogs for more detailed information.

---THINGS TO KNOW: Some programs include opportunities for actual work experience through cooperative education agreements with employers.

---RELATED PROGRAMS: PROG 131 Architecture and Environmental Design, 251 Engineering, 253 Engineering Technologies, 318 Printing and Graphics.

---DIRECTLY RELATED OCCUPATIONS: DESC 2364 Drafters.

ASSOCIATED OCCUPATIONS: DESC 2315 Engineers, 2368 Industrial Designers, 2316 Architects.

CIPS: 15.0202
48.0100

SCHOOLS:

- - - - - 25001 ALBERT LEA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS

THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

--- DEGREES OFFERED: A DIPLOMA IN MECHANICAL DRAFTING IS OFFERED.

--- LENGTH OF PROGRAM: THE MECHANICAL DRAFTING PROGRAM IS 20 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$190 FOR THE FIRST YEAR AND \$105 FOR THE SECOND YEAR.

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

--- DEGREES OFFERED: A DIPLOMA IN MECHANICAL DRAFTING IS OFFERED.

--- LENGTH OF PROGRAM: THE MECHANICAL DRAFTING PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$140 FOR BOOKS, SUPPLIES, EQUIPMENT.

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

THE 'ARCHITECTURAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO SUPPORT ARCHITECTS AND/OR THE MECHANICAL/ARCHITECTURAL ENGINEERING FUNCTION IN AN ARCHITECTURAL FIRM. INSTRUCTION INCLUDES DEVELOPING PLANS FOR BUILDINGS OR OTHER STRUCTURES USING A VARIETY OF BUILDING MATERIALS; CREATING LAYOUTS AND DESIGN IN KEEPING WITH BUILDING CODES, ZONING LAWS, ORDINANCES, AND OTHER REGULATIONS; AND STYLING AND PLANNING WITHIN COST LIMITATIONS AND CLIENT PREFERENCES.

THE 'ELECTRICAL DESIGN DRAFTING' PROGRAM IS A NEW OR REVISED PROGRAM FOR WHICH THERE WAS NO AVAILABLE DESCRIPTION AT THE UPDATE OF THIS EDITION OF MCIS. PLEASE CONTACT THE AVTI FOR INFORMATION ON THIS PROGRAM.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED IN EACH OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THE ELECTRICAL DESIGN DRAFTING PROGRAM IS 19 MONTHS LONG WHILE THE MECHANICAL DRAFTING PROGRAM IS 20 MONTHS LONG. THE ARCHITECTURAL DRAFTING PROGRAM IS 19 MONTHS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE THE FOLLOWING: ELECTRICAL DESIGN - \$210 FOR BOOKS AND SUPPLIES, \$50 FOR TOOLS, \$15 FOR LAB FEE; MECHANICAL DRAFTING - \$200 FOR BOOKS AND SUPPLIES, \$130 FOR TOOLS, \$20 FOR LAB FEE; ARCHITECTURAL DRAFTING - \$200 FOR BOOKS AND SUPPLIES, \$130 FOR TOOLS AND \$20 FOR LAB FEE.

- - - - - 25007 CANBY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ARCHITECTURAL DRAFTING' PROGRAM

PREPARES INDIVIDUALS TO SUPPORT ARCHITECTS AND/OR THE MECHANICAL/ARCHITECTURAL ENGINEERING FUNCTION IN AN ARCHITECTURAL FIRM. INSTRUCTION INCLUDES DEVELOPING PLANS FOR BUILDINGS OR OTHER STRUCTURES USING A VARIETY OF BUILDING MATERIALS; CREATING LAYOUTS AND DESIGN IN KEEPING WITH BUILDING CODES, ZONING LAWS, ORDINANCES, AND OTHER REGULATIONS; AND STYLING AND PLANNING WITHIN COST LIMITATIONS AND CLIENT PREFERENCES. NO NEW STUDENTS ARE BEING ACCEPTED THIS YEAR.

--- DEGREES OFFERED: A DIPLOMA IN ARCHITECTURAL DRAFTING IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS TWO YEARS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$260 FOR TOOLS, DRAFTING EQUIPMENT AND BOOKS.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

---OBJECTIVES OF THE PROGRAM: THE 'ARCHITECTURAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO SUPPORT ARCHITECTS AND/OR THE MECHANICAL/ARCHITECTURAL ENGINEERING FUNCTION IN AN ARCHITECTURAL FIRM. INSTRUCTION INCLUDES DEVELOPING PLANS FOR BUILDINGS OR OTHER STRUCTURES USING A VARIETY OF BUILDING MATERIALS; CREATING LAYOUTS AND DESIGN IN KEEPING WITH BUILDING CODES, ZONING LAWS, ORDINANCES, AND OTHER REGULATIONS; AND STYLING AND PLANNING WITHIN COST LIMITATIONS AND CLIENT PREFERENCES.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 22 MONTHS LONG.

- - - - - 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ARCHITECTURAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO SUPPORT ARCHITECTS AND/OR THE MECHANICAL/ARCHITECTURAL ENGINEERING FUNCTION IN AN ARCHITECTURAL FIRM. INSTRUCTION INCLUDES DEVELOPING PLANS FOR BUILDINGS OR OTHER STRUCTURES USING A VARIETY OF BUILDING MATERIALS; CREATING LAYOUTS AND DESIGN IN KEEPING WITH BUILDING CODES, ZONING LAWS, ORDINANCES, AND OTHER REGULATIONS; AND STYLING AND PLANNING WITHIN COST LIMITATIONS AND CLIENT PREFERENCES.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$170 FOR SUPPLIES AND \$65 FOR BOOKS FOR ARCHITECTURAL DRAFTING. THE PROGRAM COSTS \$120 FOR FIELD TRIPS.

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ARCHITECTURAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO SUPPORT ARCHITECTS AND/OR THE MECHANICAL/ARCHITECTURAL ENGINEERING FUNCTION IN AN ARCHITECTURAL FIRM. INSTRUCTION INCLUDES DEVELOPING PLANS FOR BUILDINGS OR OTHER STRUCTURES USING A VARIETY OF BUILDING MATERIALS; CREATING LAYOUTS AND DESIGN IN KEEPING WITH BUILDING CODES, ZONING LAWS, ORDINANCES, AND OTHER REGULATIONS; AND STYLING AND PLANNING WITHIN COST LIMITATIONS AND CLIENT PREFERENCES.

THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

--- DEGREES OFFERED: A CERTIFICATE OR DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE UP TO 92 WEEKS LONG.

--- SPECIAL COSTS: COSTS INCLUDE \$160 FOR THE ARCHITECTURAL DRAFTING PROGRAM.

- - - - - 25012 FARIBAULT AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE MECHANICAL DRAFTING PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$280 THE FIRST YEAR AND \$105 THE SECOND YEAR FOR BOOKS AND SUPPLIES.

- - - - - 25013 GRANITE FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION AND A DIPLOMA ARE OFFERED.

--- LENGTH OF PROGRAM: THE MECHANICAL DRAFTING PROGRAM IS 18 MONTHS LONG.

- - - - - 25015 HUTCHINSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

--- DEGREES OFFERED: GRADUATES COMPLETING ALL REQUIRED COMPETENCIES WILL RECEIVE A DEGREE IN MECHANICAL DRAFTING (2 YEARS).

--- LENGTH OF PROGRAM: THIS PROGRAM IS 62-79 WEEKS LONG.

- - - - - 25016 JACKSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST

DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

--- DEGREES OFFERED: DIPLOMAS ARE OFFERED IN MECHANICAL DRAFTING.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 22 MONTHS LONG.

--- SPECIAL COSTS: COSTS INCLUDE \$200 FOR BOOKS AND SUPPLIES.

- - - - - 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ARCHITECTURAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO SUPPORT ARCHITECTS AND/OR THE MECHANICAL/ARCHITECTURAL ENGINEERING FUNCTION IN AN ARCHITECTURAL FIRM. INSTRUCTION INCLUDES DEVELOPING PLANS FOR BUILDINGS OR OTHER STRUCTURES USING A VARIETY OF BUILDING MATERIALS; CREATING LAYOUTS AND DESIGN IN KEEPING WITH BUILDING CODES, ZONING LAWS, ORDINANCES, AND OTHER REGULATIONS; AND STYLING AND PLANNING WITHIN COST LIMITATIONS AND CLIENT PREFERENCES.

THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS AWARDED TO STUDENTS WHO SUCCESSFULLY COMPLETE EACH PROGRAM.

--- LENGTH OF PROGRAM: ARCHITECTURAL DRAFTING AND MECHANICAL DRAFTING ARE BOTH 84 WEEK PROGRAMS.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$220 FOR THE ARCHITECTURAL DRAFTING PROGRAM AND \$180 FOR THE MECHANICAL DRAFTING PROGRAM.

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ARCHITECTURAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO SUPPORT ARCHITECTS AND/OR THE MECHANICAL/ARCHITECTURAL ENGINEERING FUNCTION IN AN ARCHITECTURAL FIRM. INSTRUCTION INCLUDES DEVELOPING PLANS FOR BUILDINGS OR OTHER STRUCTURES USING A VARIETY OF BUILDING MATERIALS; CREATING LAYOUTS AND DESIGN IN KEEPING WITH BUILDING CODES, ZONING LAWS, ORDINANCES, AND OTHER REGULATIONS; AND STYLING AND PLANNING WITH-IN COST LIMITATIONS AND CLIENT PREFERENCES.

THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: BOTH PROGRAMS ARE 84 WEEKS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$25 FOR BOOKS AND \$80 FOR TOOLS.

- - - - - 25019 MOORHEAD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MECHANICAL DRAFTING' PROGRAM PREPARES

INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THIS IS A 20 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$235 THE FIRST YEAR AND \$130 THE SECOND YEAR FOR BOOKS AND SUPPLIES.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: MECHANICAL DRAFTING IS A 17 MONTH PROGRAM.

--- SPECIAL COSTS: COSTS WILL INCLUDE BOOKS, SUPPLIES AND EQUIPMENT.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES 18 MONTHS TO COMPLETE.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

THE 'ARCHITECTURAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO SUPPORT ARCHITECTS AND/OR THE MECHANICAL/ARCHITECTURAL ENGINEERING FUNCTION IN AN ARCHITECTURAL FIRM. INSTRUCTION INCLUDES DEVELOPING PLANS FOR BUILDINGS OR OTHER STRUCTURES USING A VARIETY OF BUILDING MATERIALS; CREATING LAYOUTS AND DESIGN IN KEEPING WITH BUILDING CODES, ZONING LAWS, ORDINANCES, AND OTHER REGULATIONS; AND STYLING AND PLANNING WITHIN COST LIMITATIONS AND CLIENT PREFERENCES.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THESE PROGRAMS TAKE 18 MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$266 FOR BOOKS AND SUPPLIES THE FIRST YEAR AND \$90 FOR THE SECOND YEAR.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

--- DEGREES OFFERED: DIPLOMAS ARE AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES 18 MONTHS TO COMPLETE.

--- SPECIAL COSTS: COSTS FOR BOOKS AND SUPPLIES WILL BE \$360.

- - - - - 25026 STAPLES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

--- DEGREES OFFERED: DIPLOMAS OR TRADE CERTIFICATES ARE AWARDED.

--- LENGTH OF PROGRAM: THE MECHANICAL DRAFTING PROGRAM LASTS 18 MONTHS.

--- SPECIAL COSTS: BOOKS, TOOLS, AND OTHER SUPPLIES ARE PROVIDED BY THE INSTITUTE AT A MINIMAL CHARGE.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'ARCHITECTURAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO SUPPORT ARCHITECTS AND/OR THE MECHANICAL/ARCHITECTURAL ENGINEERING FUNCTION IN AN ARCHITECTURAL FIRM. INSTRUCTION INCLUDES DEVELOPING PLANS FOR BUILDINGS OR OTHER STRUCTURES USING A VARIETY OF BUILDING MATERIALS; CREATING LAYOUTS AND DESIGN IN KEEPING WITH BUILDING CODES, ZONING LAWS, ORDINANCES, AND OTHER REGULATIONS; AND STYLING AND PLANNING WITHIN COST LIMITATIONS AND CLIENT PREFERENCES.

THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE

DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

--- DEGREES OFFERED: DIPLOMAS OF RECOGNITION ARE OFFERED IN THESE PROGRAMS.

--- LENGTH OF PROGRAM: THESE PROGRAMS RANGE FROM 8 TO 20 MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE \$250 FOR ARCHITECTURAL DRAFTING AND \$200 FOR MECHANICAL DRAFTING.

- - - - - 25028 THIEF RIVER FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ARCHITECTURAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO SUPPORT ARCHITECTS AND/OR THE MECHANICAL/ARCHITECTURAL ENGINEERING FUNCTION IN AN ARCHITECTURAL FIRM. INSTRUCTION INCLUDES DEVELOPING PLANS FOR BUILDINGS OR OTHER STRUCTURES USING A VARIETY OF BUILDING MATERIALS; CREATING LAYOUTS AND DESIGN IN KEEPING WITH BUILDING CODES, ZONING LAWS, ORDINANCES, AND OTHER REGULATIONS; AND STYLING AND PLANNING WITH-IN COST LIMITATIONS AND CLIENT PREFERENCES.

--- DEGREES OFFERED: DEGREES OF OCCUPATIONAL PROFICIENCY ARE AWARDED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 18 MONTHS LONG.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS AND OTHER ENGINEERING DATA.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OR A CERTIFICATE IS AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES 18 MONTHS.

--- SPECIAL COSTS: COSTS WILL INCLUDE ABOUT \$250 FOR BOOKS (ALL USABLE BOOKS ARE BOUGHT BACK AT 70 PERCENT OF PAID PRICE) AND \$150 FOR TOOLS.

- - - - - 25031 WINONA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MECHANICAL DRAFTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST ENGINEERS IN THE DEVELOPMENT OF DETAILED WORKING DRAWINGS AND RELATED SPECIFICATIONS FOR MECHANICAL DEVICES AND MACHINERY. INSTRUCTION INCLUDES SKETCHING ROUGH LAYOUTS; DRAFTING DETAILED MULTIVIEW DRAWINGS; COMPUTING MAGNITUDE DIRECTION, AND POINT OF APPLICATION OF TENSION, COMPRESSION, AND BENDING FACTORS; COMPILING AND ANALYZING TEST DATA TO DETERMINE DESIGN EFFECTS ON MACHINERY IN RELATION TO TEMPERATURE, PRESSURE, SPEED, HORSEPOWER, AND FUEL CONSUMPTION; AND PRODUCING DRAWINGS THAT INDICATE DIMENSIONS, TOLERANCES, FASTENERS, JOINING REQUIREMENTS, AND OTHER ENGINEERING DATA.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THIS IS AN 18 MONTH PROGRAM. WITH OPEN ENTRY/EXIT, IT IS POSSIBLE TO COMPLETE THE PROGRAM IN A SHORTER TIME.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$70 FOR TOOLS AND \$100 FOR BOOKS AND SUPPLIES.

- - - - - 27143 HIBBING COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'DRAFTING AND DESIGN TECHNOLOGY' PROGRAM IS DESIGNED TO PROVIDE STUDENTS WITH TRAINING FOR CAREERS AS DESIGN AND PRODUCTION DRAFTERS. GRADUATES MAY ALSO ENTER OTHER TECHNOLOGICAL CAREERS, SUCH AS TECHNICAL ILLUSTRATORS, ENGINEERING AND TECHNICAL ASSISTANTS, OR DEVELOPMENTAL LABORATORY TECHNICIANS.

--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS TWO YEARS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$150 FOR EQUIPMENT AND SUPPLIES.

- - - - - 27148 ROCHESTER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'MECHANICAL TECHNOLOGY' PROGRAM OFFERS A 'DRAFTING AND DESIGN' CONCENTRATION. THIS PROGRAM IS DESIGNED TO TRAIN STUDENTS FOR CAREERS AS MECHANICAL TECHNICIANS. GRADUATES WILL BECOME CERTIFIED BY THE ACCREDITATION BOARD FOR ENGINEERING AND TECHNOLOGY (ABET).

--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE MECHANICAL TECHNOLOGY PROGRAM TAKES TWO YEARS.

- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: A PROGRAM IN 'ARCHITECTURAL TECHNOLOGY' IS OFFERED COOPERATIVELY BY MINNEAPOLIS TECHNICAL INSTITUTE AND MINNEAPOLIS COMMUNITY COLLEGE. COURSES IN ARCHITECTURAL DRAFTING AND RELATED SUBJECTS ARE OFFERED BY M.T.I. STUDENTS ENROLLED IN THE PROGRAM ALSO COMPLETE 45 CREDITS IN GENERAL EDUCATION COURSES AT MINNEAPOLIS COMMUNITY COLLEGE.

--- DEGREES OFFERED: GRADUATES RECEIVE AN ARCHITECTURAL DRAFTING CERTIFICATE FROM M.T.I. AND AN ASSOCIATE DEGREE IN SCIENCE FROM MINNEAPOLIS C.C.

--- LENGTH OF PROGRAM: THE PROGRAM IS TWO YEARS LONG.

- - - - - 27156 NORMANDALE COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'DRAFTING OPTION OF THE MECHANICAL TECHNOLOGY' PROGRAM PREPARES STUDENTS FOR ENTRY-LEVEL JOBS IN MECHANICAL DRAFTING. THE CURRICULUM EMPHASIZES MATH, THE ENGINEERING SCIENCES, AND KNOWLEDGE OF MANUFACTURING MATERIALS AND PROCESSES. REQUIRED COURSES INCLUDE ENGINEERING, DRAWING, TOOL DESIGN, ELECTRONIC DRAFTING, LAYOUT AND DESIGN, METALLURGY, STATICS, AND ELECTRICITY AND ELECTRONICS.

--- DEGREES OFFERED: STUDENTS RECEIVE AN ASSOCIATE IN APPLIED SCIENCE DEGREE UPON COMPLETION OF THE DRAFTING OPTION OF THE MECHANICAL TECHNOLOGY PROGRAM.

--- LENGTH OF PROGRAM: MECHANICAL TECHNOLOGY IS A TWO YEAR PROGRAM.

- - - - - 82009 DUNWOODY INDUSTRIAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ARCHITECTURAL DRAFTING AND ESTIMATING' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR CAREERS AS DRAFTING TECHNICIANS AND ESTIMATORS. STUDENTS BECOME INVOLVED IN THE DESIGN, DRAWING AND ESTIMATING OF PLANS FOR RESIDENTIAL AND COMMERCIAL BUILDINGS. TO BETTER UNDERSTAND THE CONSTRUCTION FIELD, STUDENTS STUDY AND WORK IN LAND SURVEYING AND CARPENTRY. THE 'MACHINE DRAFTING AND DESIGN' PROGRAM PROVIDES THE TRAINING FOR SUCCESSFUL EMPLOYMENT IN ONE OF THE MANY DIVERSIFIED JOBS IN THE INDUSTRIAL DRAFTING FIELD. GRADUATES START EMPLOYMENT IN DETAILING, DESIGN, LAYOUT, TOOL DESIGN AND OTHER RELATED AREAS. TRAINING IN THE FUNDAMENTALS OF DRAWING AND THE PRINCIPLES OF DESIGNING ENABLES THEM TO ADVANCE TO SENIOR DRAFTERS, MACHINE DESIGNERS, CHECKERS, SUPERVISORS, AND DRAFTING DIVISION MANAGERS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED IN BOTH OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE EACH 18 TRAINING PERIODS OF 4 WEEKS FOR A TOTAL OF 72 WEEKS.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 82024 MINNEAPOLIS DRAFTING SCHOOL

--- OBJECTIVES OF THE PROGRAM: TWO MAJOR AREAS OF DRAFTING ARE EMPHASIZED BY THE SCHOOL: 'ARCHITECTURAL/STRUCTURAL' AND 'MECHANICAL/ELECTRONIC DRAFTING.' THE OBJECTIVE OF THE TRAINING IS TO PLACE GRADUATES IN ENTRY-LEVEL DRAFTING POSITIONS, FROM WHICH THEY MAY ADVANCE INTO DRAFTING AND DESIGN, MANAGEMENT, MARKETING, COMPUTER-AIDED DRAFTING/DESIGN (CAD) AND OTHER RELATED AREAS. PROGRAMS MAY INCLUDE: STRENGTH OF MATERIALS; MATH; COMPUTER-AIDED DRAFTING; ESTIMATING; RESIDENTIAL OR COMMERCIAL DESIGN IN STEEL, TIMBER AND CONCRETE; GEOMETRIC TOLERANCING; MECHANICAL DRAFTING; APPLIED PHYSICS; PLASTICS; ILLUSTRATION; SHEET METAL; HVAC; PRINTED CIRCUIT BOARDS AND ELECTRONICS. TEACHING METHODS INCLUDE BOTH CLASSROOM AND HANDS-ON LAB INSTRUCTION.

--- DEGREES OFFERED: THE SCHOOL AWARDS A TECHNICAL SCHOOL DIPLOMA TO THE STUDENT UPON SUCCESSFUL COMPLETION OF THE WORK.

--- LENGTH OF PROGRAM: THE SCHOOL OFFERS BOTH (FULLTIME) DAY AND (PART TIME) EVENING CLASSES. THE BASIC MECHANICAL-ELECTRONIC OR ARCHITECTURAL-STRUCTURAL DRAFTING PROGRAMS ARE 832 HOURS, TAKING ABOUT 6 MONTHS TO COMPLETE ON A FULLTIME BASIS, 13 MONTHS ON A PART TIME BASIS. THE ADVANCED MECHANICAL-ELECTRONIC DESIGN DRAFTING OR ADVANCED ARCHITECTURAL-STRUCTURAL DESIGN DRAFTING PROGRAMS REQUIRE AN ADDITIONAL 832 HOURS.

--- SPECIAL COSTS: THERE ARE NO ADDITIONAL COSTS ABOVE REGULAR TUITION AND A ONE-TIME REGISTRATION FEE OF \$100, WHICH INCLUDES ALL BOOKS, EQUIPMENT, AND SUPPLIES.

- - - - - 82032 NORTHWEST TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'DRAFTING' PROGRAMS PROVIDE THE STUDENT WITH THE TECHNICAL BACKGROUND REQUIRED FOR EMPLOYMENT AS A DRAFTING TECHNICIAN IN INDUSTRY. IN ADDITION TO THE STUDY OF DRAFTING, BOTH PROGRAMS EMPHASIZE THE MATHEMATICAL AND TECHNICAL SPECIALITIES. THE MATHEMATICAL SCIENCES UNDERLIE ALL BRANCHES OF ENGINEERING TECHNOLOGY, INCLUDING DRAFTING. THEY BECOME A CRITICAL DETERMINANT OF BOTH THE LEVEL AND THE QUALITY OF TECHNICAL TRAINING OFFERED. ANOTHER OBJECTIVE IS THE TRAINING OF STUDENTS IN THE LATEST STATE OF THE ART IN DRAFTING. A COMPUTER AIDED DRAFTING AND DESIGN (CADD) SYSTEM, ACQUIRED BY NTI IN OCTOBER OF 1983, IS USED THROUGHOUT THE ASSOCIATE DEGREE PROGRAM, SO THE STUDENT WILL HAVE SEVERAL CADD DRAWINGS FOR HIS OR HER PORTFOLIO.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE FOUR SEMESTERS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE BOOKS, TOOLS, AND SUPPLIES.

292 ELECTRICITY AND ELECTRONICS REPAIR

Programs in electricity and electronics repair are designed to prepare people to install, maintain, and repair radios, televisions, business machines, appliances, computers, and other electronic systems. Depending on the specialty, programs include instruction in electrical circuitry; simple gearing, linkages, and lubrication of machines and appliances; and the use of testing equipment. Programs vary in length from one-year certificates to two-year associate degrees at community colleges. Private trade schools offer programs of six months to one year. Apprenticeships are also available (see PROG 631). Some states require that repairers of home entertainment products be licensed. (See PREP 3168.)

---PROGRAM ADMISSION: Admission requirements vary with the school and length of the program. See school catalogs for specific details.

---TYPICAL COURSE WORK: Course work includes lectures, technical reading, and hands-on experience in laboratory or workshop settings. Courses vary depending on program specialty, but core subjects usually include:

Basic Electronics	Electrical Theory
Electronics Design and Lab	Electrical Maintenance
Digital Electronics	Communication Elec-
Computer Electronics	tronics

Other courses might include math, science, sales skill, communications, customer relations, and related business courses.

---GRADUATION REQUIREMENTS: Requirements vary with the school and length of the program. See school catalogs for more information.

---THINGS TO KNOW: Most schools have both day and evening classes in electricity and electronics repair. In many programs students are required to supply their own tools.

---RELATED PROGRAMS: PROG 253 Engineering Technologies, 287 Industrial Mechanics, 297 Heating and Cooling Mechanics.

---DIRECTLY RELATED OCCUPATIONS: DESC 3168 Radio and Television Service Technicians, 3164 Office Machine Repairers, 3169 Appliance Repairers, 5634 Computer Service Technicians.

ASSOCIATED OCCUPATION: DESC 5626 Electricians.

---REFERENCES:

Board of Electricity
Griggs Midway Bldg., Room N-191
1821 University Avenue
St. Paul, MN 55104
(612) 297-2111

CIPS: 47.01
15.0402

SCHOOLS:

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'APPLIANCE REPAIR/REFRIGERATION'

PROGRAM IS AN INSTRUCTIONAL PROGRAM THAT PREPARES INDIVIDUALS TO REPAIR, INSTALL AND SERVICE GAS, ELECTRIC AND MICROWAVE CONSUMER APPLIANCES SUCH AS STOVES, REFRIGERATORS, DRYERS, WATER HEATERS, WASHERS AND DISHWASHERS. IT ALSO INCLUDES TRAINING IN LIGHT COMMERCIAL REFRIGERATION, DOMESTIC AIR CONDITIONING UNITS, HEAT PUMPS, WALK-IN COOLERS, SOLAR SYSTEMS, AUTOMOTIVE AND TRUCK AIR CONDITIONING SYSTEMS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$50 PER YEAR FOR BOOKS, \$6 FOR SAFETY GLASSES, AND \$325 FOR TOOLS.

----- 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'VENDING MACHINE REPAIR' PROGRAM PREPARES INDIVIDUALS TO INSTALL, SERVICE, ADJUST, AND REPAIR MECHANICAL AND ELECTRONIC COIN VENDING AND AMUSEMENT MACHINES; ENSURE PROPER MACHINE FUNCTIONING; PERFORM TESTS ON ICEMAKING, REFRIGERATION, CARBONATION, AND EVAPORATION SYSTEMS; DISPENSE ELECTRICAL AND COIN HANDLING SYSTEMS; AND IDENTIFY AND CORRECT MALFUNCTIONS, INCLUDING REPLACING WORN OR DEFECTIVE ELECTRICAL AND/OR MECHANICAL PARTS USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES REFINISHING UNITS, TRANSPORTING UNITS TO LOCATION, AND CONNECTING WATER OF ELECTRIC LINES.

--- DEGREES OFFERED: A DIPLOMA OF COMPLETION AND A CERTIFICATE OF ATTENDANCE ARE OFFERED.

--- LENGTH OF PROGRAM: THE VENDING MACHINE REPAIR PROGRAM IS 21 MONTHS LONG. A 9 MONTH MUSIC AND GAME MACHINE REPAIR PROGRAM IS ALSO OFFERED.

----- 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CABLE TV EQUIPMENT INSTALLATION AND MAINTENANCE' PROGRAM TRAINS INDIVIDUALS TO PREPARE FOR AND MAKE EQUIPMENT INSTALLATION AND MAINTAIN AND REPAIR EQUIPMENT FOR TELEVISION SYSTEMS THAT UTILIZE CABLE AS A MEANS OF TRANSMISSION. INSTRUCTION INCLUDES CABLE INSTALLATION, CABLE CONNECTIONS, ELECTRICAL AND ELECTRONIC COMPONENTS INVOLVED IN PROGRAM TRANSMISSION, AND PROGRAM INTERCEPTION FOR TRANSMISSION, AS WELL AS A GENERAL OVERALL KNOWLEDGE OF THE PROBLEMS ENCOUNTERED IN INSTALLING, MONITORING, MAINTAINING AND SERVICING EQUIPMENT USED IN THE CABLE TRANSMISSION INDUSTRY.

--- DEGREES OFFERED: A CERTIFICATE AND A DEGREE OF OCCUPATIONAL PROFICIENCY ARE OFFERED.

--- LENGTH OF PROGRAM: THE CABLE TELEVISION PROGRAM IS 22 MONTHS LONG.

----- 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRICAL MAINTENANCE AND REPAIR' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, AND REPAIR ELECTRICAL/ELECTRONIC EQUIPMENT USED IN INDUSTRY AND MANUFACTURING. INSTRUCTION INCLUDES USING ACTUAL EQUIPMENT SUCH AS POWER SUPPLIES AMPLIFIERS, MOTORS, CONTROLS, DIGITAL AND COMPUTER CIRCUITRY, SYNCHRO- AND SERVO-MECHANISMS, MECHANICAL-POWER-TRANSFER SYSTEMS, HYDRAULIC SYSTEMS, AND THREE-PHASE A.C., ELECTRONIC WAVE-SHAPING, AND CONTROL CIRCUITRY.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 92 WEEKS LONG.

----- 25014 HIBBING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRICAL MAINTENANCE AND REPAIR' PROGRAM PREPARES INDIVIDUALS TO INSTALL, MAINTAIN, AND REPAIR ELECTRICAL/ELECTRONIC EQUIPMENT USED IN INDUSTRY AND MANUFACTURING. INSTRUCTION INCLUDES USING ACTUAL EQUIPMENT SUCH AS POWER SUPPLIES

AMPLIFIERS, MOTORS, CONTROLS, DIGITAL AND COMPUTER CIRCUITRY, SYNCHRO- AND SERVO-MECHANISMS, MECHANICAL-POWER-TRANSFER SYSTEMS, HYDRAULIC SYSTEMS, AND THREE-PHASE A.C., ELECTRONIC WAVE-SHAPING, AND CONTROL CIRCUITRY.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

- - - - - 25015 HUTCHINSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MEDIA PRODUCTION' PROGRAM PREPARES INDIVIDUALS TO OPERATE, ADJUST, MAKE MINOR REPAIRS, AND DIAGNOSE MAJOR DIFFICULTIES IN AUDIOVISUAL DEVICES, EQUIPMENT AND SYSTEMS USED IN EDUCATION OR COMMUNICATION APPLICATION. SYSTEMS INCLUDE LOUDSPEAKER, SLIDES, MOVIE FILM, OVERHEAD PROJECTION EQUIPMENT, TAPE-RECORDING EQUIPMENT, VIDEO EQUIPMENT, AND TELECOMMUNICATIONS. INSTRUCTION IN DISTRIBUTION OF ELECTRONIC OR PRINT MEDIA, CONSTRUCTION OF EQUIPMENT, THE PROCEDURES, PROCESSES, AND TECHNIQUES FOR MAKING OVERHEAD PROJECTION MATERIALS, PHOTOGRAPHIC SLIDES, VIDEOTAPES, GRAPHS, CHARTS, TABLES, OR OTHER PROJECTABLE MATERIALS, THE ADMINISTRATION OF EQUIPMENT ACQUISITION, STORING, SERVICING, CONTROLLING, AND PACKAGING FOR TRANSPORTATION, COST AND MAINTENANCE IS INCLUDED.

--- DEGREES OFFERED: STUDENTS WHO MEET ALL OF THE CORE REQUIREMENTS (COMPETENCIES) WILL RECEIVE A DEGREE PLUS A CERTIFICATE OF COMPETENCY.

--- LENGTH OF PROGRAM: THE PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR BOOKS, SUPPLIES AND FEES AND CLOTHING WILL INCLUDE \$430 - \$580 FOR THE FIRST YEAR, AND \$270 - \$295 FOR THE SECOND YEAR.

- - - - - 25016 JACKSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRIC MOTOR REPAIR' PROGRAM PREPARES INDIVIDUALS TO ASSEMBLE, INSTALL, TEST, MAINTAIN, AND REPAIR ELECTRIC MOTORS, GENERATORS, TRANSFORMERS, AND RELATED EQUIPMENT.

THE 'APPLIANCE REPAIR/REFRIGERATION' PROGRAM IS AN INSTRUCTIONAL PROGRAM THAT PREPARES INDIVIDUALS TO REPAIR, INSTALL AND SERVICE GAS, ELECTRIC AND MICROWAVE CONSUMER APPLIANCES SUCH AS STOVES, REFRIGERATORS, DRYERS, WATER HEATERS, WASHERS AND DISHWASHERS. IT ALSO INCLUDES TRAINING IN LIGHT COMMERCIAL REFRIGERATION, DOMESTIC AIR CONDITIONING UNITS, HEAT PUMPS, WALK-IN COOLERS, SOLAR SYSTEMS, AUTOMOTIVE AND TRUCK AIR CONDITIONING SYSTEMS.

--- DEGREES OFFERED: STUDENTS WHO SUCCESSFULLY COMPLETE THE TRAINING PROGRAM WILL RECEIVE A TECHNICAL SCHOOL DIPLOMA.

--- LENGTH OF PROGRAM: APPLIANCE REPAIR IS 9 MONTHS LONG. THE ELECTRIC MOTOR REPAIR PROGRAM IS 11 MONTHS LONG.

--- SPECIAL COSTS: THE COST OF BOOKS, TOOLS AND SUPPLIES IS: ELECTRIC MOTOR REPAIR - \$400; APPLIANCE REPAIR - \$250.

- - - - - 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MEDIA TECHNICIAN (ELECTRONICS)' PROGRAM PREPARES INDIVIDUALS TO OPERATE, ADJUST, TROUBLESHOOT, AND REPAIR, AS WELL AS DIAGNOSE MAJOR DIFFICULTIES IN AUDIOVISUAL DEVICES, EQUIPMENT, AND SYSTEMS USED IN ELECTRONIC EDUCATIONAL COMMUNICATION APPLICATIONS INCLUDING LOUD-SPEAKER SYSTEMS, SLIDES, MOVIE FILM, OR OVERHEAD PROJECTION EQUIPMENT AND TAPE RECORDERS. INSTRUCTION IN FUNDAMENTAL ELECTRONICS AS IT APPLIES TO TROUBLESHOOTING, MAINTAINING AND REPAIRING OF ALL ELECTRONIC MEDIA EQUIPMENT IS INCLUDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 84 WEEKS LONG.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MEDIA TECHNICIAN (ELECTRONICS)' PROGRAM PREPARES INDIVIDUALS TO OPERATE, ADJUST, TROUBLESHOOT, AND REPAIR, AS WELL AS DIAGNOSE MAJOR DIFFICULTIES IN AUDIOVISUAL DEVICES, EQUIPMENT, AND SYSTEMS USED IN ELECTRONIC EDUCATIONAL COMMUNICATION APPLICATIONS INCLUDING LOUD-SPEAKER SYSTEMS, SLIDES, MOVIE FILM, OR OVERHEAD PROJECTION EQUIPMENT AND TAPE RECORDERS. INSTRUCTION IN FUNDAMENTAL ELECTRONICS AS IT APPLIES TO TROUBLESHOOTING, MAINTAINING AND REPAIRING OF ALL ELECTRONIC MEDIA EQUIPMENT IS INCLUDED.

THE 'BIOMEDICAL EQUIPMENT TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO INSTALL, CALIBRATE, OPERATE AND MAINTAIN SOPHISTICATED LIFE-SUPPORT EQUIPMENT FOUND IN HOSPITALS, MEDICAL CENTERS, AND RESEARCH LABORATORIES. INSTRUCTION INCLUDES USE OF TESTING AND DIAGNOSTIC INSTRUMENTS; CALIBRATING TECHNIQUES; POTENTIAL HAZARDS AND SAFETY PRECAUTIONS; AND METHODS OF INSTALLATION, REPAIR, MAINTENANCE, AND OPERATION OF THE EQUIPMENT.

THE 'RADIO AND TELEVISION REPAIR' PROGRAM PREPARES INDIVIDUALS TO ASSEMBLE, INSTALL, OPERATE, MAINTAIN AND REPAIR ONE WAY COMMUNICATIONS EQUIPMENT AND SYSTEMS INCLUDING AM-FM RADIO, TELEVISION AND OTHER CONSUMER DEVICES OR SYSTEMS. INSTRUCTION INCLUDES USING ACTUAL EQUIPMENT OR EDUCATIONAL TRAINERS WITH VARIOUS TYPES OF EQUIPMENT, MOTORS, MECHANICAL DEVICES, POWER SUPPLIES, AMPLIFIERS AND DIGITAL CIRCULTRY; AND USING TESTING EQUIPMENT.

THE 'MAJOR APPLIANCES REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR, INSTALL, AND SERVICE MAJOR GAS. ELECTRIC, AND MICROWAVE CONSUMER APPLIANCES SUCH AS STOVES, REFRIGERATORS, DRYERS, WATER HEATERS, WASHERS, AND DISHWASHERS.

THE 'VENDING MACHINE REPAIR' PROGRAM PREPARES INDIVIDUALS TO INSTALL, SERVICE, ADJUST, AND REPAIR MECHANICAL AND ELECTRONIC COIN VENDING AND AMUSEMENT MACHINES; ENSURE PROPER MACHINE FUNCTIONING; PERFORM TESTS ON ICEMAKING, REFRIGERATION, CARBONATION, AND EVAPORATION SYSTEMS; DISPENSE ELECTRICAL AND COIN HANDLING SYSTEMS; AND IDENTIFY AND CORRECT MALFUNCTIONS, INCLUDING REPLACING WORN OR DEFECTIVE ELECTRICAL AND/OR MECHANICAL PARTS USING HAND AND POWER TOOLS. INSTRUCTION INCLUDES REFINISHING UNITS, TRANSPORTING UNITS TO LOCATION, AND CONNECTING WATER OF ELECTRIC LINES.

--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED TO STUDENTS WHO SUCCESSFULLY COMPLETE EACH PROGRAM.

--- LENGTH OF PROGRAM: THE MEDIA TECHNICIAN/ELECTRONICS PROGRAM IS 23 MONTHS LONG. THE BIOMEDICAL EQUIPMENT TECHNICIAN PROGRAM IS 24 MONTHS LONG. THE RADIO AND TELEVISION AND MAJOR APPLIANCE REPAIR PROGRAMS ARE 18 MONTHS LONG. THE VENDING MACHINE PROGRAM IS 14 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$360 FOR THE MEDIA TECHNICIAN/ELECTRONICS PROGRAM, \$400 FOR THE BIO-MEDICAL EQUIPMENT PROGRAM AND \$340 FOR RADIO AND TELEVISION REPAIR FOR BOOKS, SUPPLIES AND EQUIPMENT.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MAJOR APPLIANCES REPAIR' PROGRAM PREPARES INDIVIDUALS TO REPAIR, INSTALL, AND SERVICE MAJOR GAS. ELECTRIC, AND MICROWAVE CONSUMER APPLIANCES SUCH AS STOVES, REFRIGERATORS, DRYERS, WATER HEATERS, WASHERS, AND DISHWASHERS.

THE 'RADIO AND TELEVISION REPAIR' PROGRAM PREPARES INDIVIDUALS TO ASSEMBLE, INSTALL, OPERATE, MAINTAIN AND REPAIR ONE WAY COMMUNICATIONS EQUIPMENT AND SYSTEMS INCLUDING AM-FM RADIO, TELEVISION AND OTHER CONSUMER DEVICES OR SYSTEMS. INSTRUCTION INCLUDES USING ACTUAL EQUIPMENT OR EDUCATIONAL TRAINERS WITH VARIOUS TYPES OF EQUIPMENT, MOTORS, MECHANICAL DEVICES, POWER SUPPLIES, AMPLIFIERS AND DIGITAL CIRCULTRY; AND USING TESTING EQUIPMENT.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.
--- LENGTH OF PROGRAM: THE MAJOR APPLIANCE PROGRAM IS 9 MONTHS LONG. THE RADIO AND TELEVISION REPAIR PROGRAM IS 18 MONTHS LONG.
--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$225 - \$250 FOR BOOKS AND SUPPLIES.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'MEDIA PRODUCTION' PROGRAM PREPARES INDIVIDUALS TO OPERATE, ADJUST, MAKE MINOR REPAIRS, AND DIAGNOSE MAJOR DIFFICULTIES IN AUDIOVISUAL DEVICES, EQUIPMENT AND SYSTEMS USED IN EDUCATION OR COMMUNICATION APPLICATION. SYSTEMS INCLUDE LOUDSPEAKERS, SLIDES, MOVIE FILM, OVERHEAD PROJECTION EQUIPMENT, TAPE-RECORDING EQUIPMENT, VIDEO EQUIPMENT, AND TELECOMMUNICATIONS. INSTRUCTION IN DISTRIBUTION OF ELECTRONIC OR PRINT MEDIA, CONSTRUCTION OF EQUIPMENT, THE PROCEDURES, PROCESSES, AND TECHNIQUES FOR MAKING OVERHEAD PROJECTION MATERIALS, PHOTOGRAPHIC SLIDES, VIDEOTAPES, GRAPHS, CHARTS, TABLES, OR OTHER PROJECTABLE MATERIALS, THE ADMINISTRATION OF EQUIPMENT ACQUISITION, STORING, SERVICING, CONTROLLING, AND PACKAGING FOR TRANSPORTATION, COST AND MAINTENANCE IS INCLUDED.

--- DEGREES OFFERED: DIPLOMAS OF RECOGNITION ARE OFFERED IN THIS PROGRAM.

--- LENGTH OF PROGRAM: THE MEDIA PRODUCTION PROGRAM IS FROM 10 TO 14 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS ARE \$300.

- - - - - 25029 WADENA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CABLE TV EQUIPMENT INSTALLATION AND MAINTENANCE' PROGRAM TRAINS INDIVIDUALS TO PREPARE FOR AND MAKE EQUIPMENT INSTALLATION AND MAINTAIN AND REPAIR EQUIPMENT FOR TELEVISION SYSTEMS THAT UTILIZE CABLE AS A MEANS OF TRANSMISSION. INSTRUCTION INCLUDES CABLE INSTALLATION, CABLE CONNECTIONS, ELECTRICAL AND ELECTRONIC COMPONENTS INVOLVED IN PROGRAM TRANSMISSION, AND PROGRAM INTERCEPTION FOR TRANSMISSION, AS WELL AS A GENERAL OVERALL KNOWLEDGE OF THE PROBLEMS ENCOUNTERED IN INSTALLING, MONITORING, MAINTAINING AND SERVICING EQUIPMENT USED IN THE CABLE TRANSMISSION INDUSTRY.

THE 'TELEPHONE CENTRAL STATION REPAIR' PROGRAM PREPARES INDIVIDUALS TO DIAGNOSE AND TROUBLESHOOT ELECTRONIC DEVICES AND CIRCUITS USED IN THE CENTRAL STATION OPERATIONS OF THE TELEPHONE COMMUNICATIONS INDUSTRY. INSTRUCTION INCLUDES BASIC FUNDAMENTAL ELECTRONICS AS IT APPLIES TO THE TELEPHONE CENTRAL STATION, AND OPERATION AND REPAIR OF COMPONENTS IN THE CENTRAL STATION AS WELL AS MAINTENANCE OF THE ENTIRE STATION SYSTEM.

--- DEGREES OFFERED: DIPLOMAS ARE AWARDED.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE APPROXIMATELY 20 MONTHS. STUDENTS ENROLLED IN EITHER OF THE THESE PROGRAMS TAKE THE FIRST YEAR TRAINING IN ELECTRONICS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR THE TWO YEARS ARE \$425 FOR CABLE TV AND \$625 FOR TELEPHONE ELECTRONICS FOR BOOKS, SUPPLIES AND TOOLS.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'COMMUNICATIONS EQUIPMENT REPAIR' PROGRAM PREPARES INDIVIDUALS TO ASSEMBLE, INSTALL, OPERATE, MAINTAIN, AND REPAIR ONE- AND TWO-WAY COMMUNICATIONS EQUIPMENT AND SYSTEMS, INCLUDING AM AND FM RADIO, TELEVISION, HEARING AIDS AND OTHER ELECTRONIC COMMUNICATION DEVICES, OR SYSTEMS. INSTRUCTION INCLUDES USING ACTUAL EQUIPMENT OR EDUCATIONAL TRAINERS WITH VARIOUS TYPES OF EQUIPMENT MOTORS, MECHANICAL DEVICES, POWER SUPPLIES, AMPLIFIERS AND DIGITAL CIRCUITRY; THE USE OF

TESTING EQUIPMENT; AND FEDERAL COMMUNICATIONS COMMISSION (FCC) LICENSING REQUIREMENTS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OR A CERTIFICATE IS AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$275 - \$300 FOR BOOKS (ALL USABLE BOOKS ARE BOUGHT BACK AT 70 PERCENT OF PAID PRICE) AND \$150 - \$175 FOR TOOLS.

- - - - - 25031 WINONA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MEDIA TECHNICIAN (ELECTRONICS)' PROGRAM PREPARES INDIVIDUALS TO OPERATE, ADJUST, TROUBLESHOOT, AND REPAIR, AS WELL AS DIAGNOSE MAJOR DIFFICULTIES IN AUDIOVISUAL DEVICES, EQUIPMENT, AND SYSTEMS USED IN ELECTRONIC EDUCATIONAL COMMUNICATION APPLICATIONS INCLUDING LOUDSPEAKER SYSTEMS, SLIDES, MOVIE FILM, OR OVERHEAD PROJECTION EQUIPMENT AND TAPE RECORDERS. INSTRUCTION IN FUNDAMENTAL ELECTRONICS AS IT APPLIES TO TROUBLESHOOTING, MAINTAINING AND REPAIRING OF ALL ELECTRONIC MEDIA EQUIPMENT IS INCLUDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 19 MONTHS LONG.

- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: AN 'ELECTRONICS TECHNOLOGY' PROGRAM IS OFFERED COOPERATIVELY BY MINNEAPOLIS TECHNICAL INSTITUTE AND MINNEAPOLIS COMMUNITY COLLEGE. THE PROGRAM IS DESIGNED TO TRAIN STUDENTS FOR EMPLOYMENT AS ELECTRONIC TECHNICIANS. COURSES IN ELECTRONICS ARE TAKEN AT M.T.I. STUDENTS ALSO COMPLETE 45 CREDITS IN GENERAL EDUCATION AT MINNEAPOLIS C.C.

--- DEGREES OFFERED: GRADUATES RECEIVE AN ELECTRONICS TECHNICIAN CERTIFICATE FROM M.T.I. AND AN ASSOCIATE IN SCIENCE DEGREE FROM MINNEAPOLIS COMMUNITY COLLEGE.

--- LENGTH OF PROGRAM: THE PROGRAM IS TWO YEARS LONG.

- - - - - 82005 BROWN INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'COLOR TELEVISION ELECTIVE' COURSE IN THE ELECTRONICS 220 AND 440 PROGRAM IS DESIGNED TO GIVE STUDENTS A THOROUGH BACKGROUND IN THE SOPHISTICATED TUBE, TRANSISTORIZED AND INTEGRATED CIRCUIT COLOR TV CIRCUITS AND SYSTEMS. THEY LEARN TO ANALYZE AND CORRECT PROBLEMS IN ALL MAKES AND MODELS OF COLOR TV'S AS WELL AS LEARN ELECTRONIC FUNDAMENTALS.

--- DEGREES OFFERED: NO DEGREE IS OFFERED FOR THIS COURSE, BUT STUDENTS WHO COMPLETE THE ELECTRONICS 220 AND 440 PROGRAM RECEIVE AN ASSOCIATE OF APPLIED SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THIS COURSE RUNS 12 WEEKS LONG, WHILE THE ELECTRONICS 220 AND 440 PROGRAM IS 2 YEARS LONG.

--- SPECIAL COSTS: COSTS MAY VARY FROM \$30 TO \$180 FOR BOOKS AND SUPPLIES.

- - - - - 82009 DUNWOODY INDUSTRIAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: 'ELECTRONICS, COMPUTER-INDUSTRIAL' PROVIDES TRAINING IN A WIDE VARIETY OF ELECTRONIC COMMUNICATION AND ENTERTAINMENT EQUIPMENT INCLUDING AM-FM, STEREO AUDIO SYSTEMS, AND TELEVISION RECEIVERS. ALSO, HIGH FREQUENCY TRANSMITTING AND RECEIVING EQUIPMENT IS COVERED WITH EMPHASIS TOWARD FCC LICENSING. TECHNICIANS ARE EMPLOYED IN SYSTEMS APPLICATIONS, INSTALLATION, DESIGN, MANUFACTURING, AND SALES.

THE 'COMPUTER AND DIGITAL SYSTEMS TECHNOLOGY' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR CAREERS IN THE INSTALLING, MAINTAINING, AND TROUBLESHOOTING OF COMPUTER SYSTEMS. THERE ARE THREE AREAS OF STUDY: JOB KNOWLEDGE

WHICH INCLUDES APPLICATION AND SAFETY; TRADE KNOWLEDGE WHICH INCLUDES THE STUDY OF TOOLS, MACHINES, MATERIALS, AND TRADE LITERATURE; AND APPLIED SUBJECTS WHICH INCLUDE THE STUDY OF FORMULAS, SCIENCE, TERMS, DEFINITIONS, AND CALCULATIONS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM CONSISTS OF 20 TRAINING PERIODS, EACH 4 WEEKS LONG, FOR A TOTAL OF 80 WEEKS.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 82027 MINNESOTA SCHOOL OF BUSINESS

--- OBJECTIVES OF THE PROGRAM: GRADUATES OF 'ELECTRONICS ENGINEERING TECHNOLOGY' PROGRAM WILL BE PREPARED TO WORK IN MANY DIVERSIFIED AREAS OF MODERN ELECTRONICS. THEY WILL BE THOROUGHLY ACQUAINTED WITH NUMEROUS CIRCUITS AND THE SPECIALIZED TECHNIQUES DEMANDED BY THIS CAREER FIELD. THEY WILL BE EXPOSED TO A COMBINATION OF CLASSROOM THEORY AND HANDS-ON LABORATORY EXPERIMENTS THAT WILL ENABLE THEM TO QUICKLY GRASP THE PARTICULAR REQUIREMENTS OF THIS CHANGING TECHNOLOGY.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 96 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS AND EQUIPMENT.

- - - - - 82033 NORTHWESTERN ELECTRONICS INSTITUTE

--- OBJECTIVES OF THE PROGRAM: FIVE DAY SCHOOL ELECTRONICS PROGRAMS ARE OFFERED: 'CONSUMER ELECTRONICS', 'COMPUTER SYSTEMS', 'COMMUNICATIONS/TELEVISION TECHNICIAN', 'COMPUTER/ INDUSTRIAL ELECTRONICS TECHNICIAN'. THE EVENING PROGRAMS ARE: 'ELECTRONIC TECHNICIAN', 'DIGITAL SPECIALIST', 'INDUSTRIAL SPECIALIST', AND 'VIDEO SPECIALIST'. THESE PROGRAMS ALL PREPARE STUDENTS FOR EMPLOYMENT AS ELECTRONIC TECHNICIANS. ALL STUDENTS TAKE BASIC ELECTRONICS COURSES AND THEN TAKE COURSES RELATED TO THE SPECIFIC PROGRAMS IN WHICH THEY ARE ENROLLED. STUDENTS WHO FIND THAT NONE OF THESE PROGRAMS MEET THEIR INDIVIDUAL NEEDS MAY ARRANGE SHORT-TERM CERTIFICATE PROGRAMS TO MEET THEIR SPECIFIC GOALS.

--- DEGREES OFFERED: CONSUMER ELECTRONICS AND COMPUTER SYSTEMS PROGRAMS OFFER THE ASSOCIATE IN ELECTRONICS TECHNOLOGY DEGREE. THE OTHER FORMAL PROGRAMS OFFER DIPLOMAS. SHORT-TERM PROGRAMS WHICH ARE INDIVIDUALLY ARRANGED OFFER CERTIFICATES.

--- LENGTH OF PROGRAM: THE 2 ASSOCIATE DEGREE PROGRAMS ARE 24 MONTHS LONG. THE COMPUTER/INDUSTRIAL TECHNICIAN PROGRAM IS 18 MONTHS LONG, AND THE COMMUNICATIONS/TELEVISION TECHNICIAN PROGRAM IS 18 MONTHS LONG. THE PART-TIME DIGITAL SPECIALIST PROGRAM IS 24 MONTHS LONG, WHILE THE PART-TIME VIDEO SPECIALIST AND INDUSTRIAL SPECIALIST PROGRAMS ARE 27 MONTHS LONG. THE ELECTRONICS TECHNICIAN PROGRAM IS 36 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$200 - \$300 FOR TEXT BOOKS, \$250 FOR TOOLS AND \$45 FOR MISCELLANEOUS EXPENSES.

Programs in metalworking are designed to prepare people to plan, make, assemble, test, and repair parts and structures in which metals are used. Training includes how metals are cast, shaped, molded, heat treated, cut, pressed, fused, stamped, machined, or other ways upon which they are worked. Metalworking programs intend to prepare people for occupations doing foundry work, metal fabrication, patternmaking, sheetmetal work, tool and die making, welding, and other machine shop or precision metal work.

Many of these skills may be learned in apprenticeship programs (see PROG 631). Many private training schools and community colleges offer short programs in individual metal-working skills, such as welding. Many community colleges also offer one-year certificate and two-year associate degree programs in various metalworking skills. A few four-year colleges offer bachelor's degree programs emphasizing manufacturing analysis, planning, and control.

---PROGRAM ADMISSION: Requirements vary. See school catalogs for details. A high school diploma or its equivalent is normally required for admission to colleges and universities.

---TYPICAL COURSE WORK: Course work varies with school, length of program, and specialization. Longer programs usually include all or most of the following:

Machine Shop Operation	Machine Tools
Safety	Industrial Materials
Welding	Blueprint Reading
Metallurgy	Gas Processes

Most instruction takes place in the shop, and involves extensive hands-on, practical experience. Associate (two-year) degrees and bachelor's (four-year) degrees also usually include courses in English, communications, and health. See school catalogs for complete course descriptions.

---GRADUATION REQUIREMENTS: Requirements vary. See school catalogs for more information.

---THINGS TO KNOW: Students may be required to purchase tools.

Many people learn metalworking skills through three- to four-year apprenticeships (see PROG 631).

Information on apprenticeship programs is also available through:

International Association of Machinists and
Aerospace Workers
Machinists Building
1300 Connecticut Avenue, NW
Washington, D.C. 20036

---RELATED PROGRAMS: PROG 291 Drafting, 631 Apprenticeship Programs, 253 Engineering Technologies, 287 Industrial Mechanics.

---DIRECTLY RELATED OCCUPATIONS: DESC 5483 Boilermakers, 5482 Welders, 5427 Coremakers, 5464 Machinists, 5484 Sheet Metal Workers, 5462 Tool and Die Makers, 5424 Molders, 5472 Machine Tool Operators.

ASSOCIATED OCCUPATIONS: DESC 5486 Auto Body Repairers.

CIPS: 48.05
15.0610

SCHOOLS:

- - - - - 25001 ALBERT LEA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: A DIPLOMA IN WELDING IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 10 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$350 PER YEAR FOR BOOKS, SUPPLIES AND TOOLS.

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

THE 'WELDING AND SHEET METAL TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO WELD IN ALL POSITIONS AND TO DO PRECISION, CLOSE TOLERANCE SHEET METAL WELDING. INSTRUCTION INCLUDES IN FLUX-CORED, PLASMA AND SHIELDED METAL ARC; MIG; TIG; OXY-ACETYLENE AND FABRICATION PRACTICE. CLOSE TOLERANCE SHEET METAL, JIG AND FIXTURE LAYOUT AND DESIGN AND ROBOTIC AND LASER APPLICATIONS ARE ALSO INCLUDED.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE MACHINE SHOP PROGRAM IS 19 MONTHS LONG. THE WELDING AND SHEET METAL PROGRAM IS 11-17 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR MACHINE SHOP WILL INCLUDE \$150 FOR BOOKS AND \$6 FOR SAFETY GLASSES AND FOR WELDING WILL INCLUDE \$85 FOR BOOKS, \$6 FOR SAFETY GLASSES AND \$85 FOR SPECIAL CLOTHING.

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: DIPLOMAS AND CERTIFICATES ARE OFFERED.

--- LENGTH OF PROGRAM: THE MACHINE SHOP PROGRAM IS 18 MONTHS LONG, WHILE THE WELDING PROGRAM IS TEN MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$90 FOR BOOKS AND SUPPLIES, \$210 FOR TOOLS, AND A \$10 LAB FEE FOR THE MACHINE SHOP PROGRAM. WELDING COSTS INCLUDE \$220 FOR BOOKS, SUPPLIES AND TOOLS AND A \$15 LAB FEE.

- - - - - 25004 AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY AND A CLOCK HOUR CERTIFICATE IN THE MACHINE SHOP PROGRAM ARE OFFERED.

--- LENGTH OF PROGRAM: THE MACHINE SHOP AND WELDING PROGRAMS ARE BOTH 18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR MACHINE SHOP 1 WILL BE \$575, FOR MACHINE SHOP 2 THEY WILL BE \$365. THIS WILL INCLUDE TOOLS, BOOKS, SUPPLIES, UNIFORMS, MISCELLANEOUS AND SAFETY EQUIPMENT.

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: A DIPLOMA OF COMPLETION AND A CERTIFICATE OF ATTENDANCE IN WELDING ARE OFFERED.

--- LENGTH OF PROGRAM: THE WELDING PROGRAM IS 11 MONTHS LONG. AN ADVANCED WELDING COURSE OF 3 MONTHS IS ALSO OFFERED.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$75 FOR BOOKS, AND \$150 FOR SUPPLIES AND UNIFORMS.

- - - - - 25007 CANBY AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: A DIPLOMA OF GRADUATION IN WELDING IS OFFERED.

--- LENGTH OF PROGRAM: THE WELDING PROGRAM IS 11 MONTHS LONG.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: CERTIFICATES AND DEGREES OF OCCUPATIONAL PROFICIENCY ARE OFFERED.

--- LENGTH OF PROGRAM: THE MACHINE SHOP AND WELDING PROGRAMS ARE 22 MONTHS LONG.

- - - - - 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.
--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS OFFERED.
--- LENGTH OF PROGRAM: THE WELDING PROGRAM IS 9 MONTHS LONG.
--- SPECIAL COSTS: PROGRAM RELATED COSTS ARE \$35 FOR BOOKS, \$150 FOR FIELD TRIPS AND \$155 FOR UNIFORMS.

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.
THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.
--- DEGREES OFFERED: A CERTIFICATE OR DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.
--- LENGTH OF PROGRAM: THE MACHINE SHOP PROGRAM IS UP TO 92 WEEKS LONG. THE WELDING PROGRAM IS 46 WEEKS LONG.
--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$760 FOR BOOKS, SUPPLIES AND TOOLS FOR MACHINE TECHNOLOGY AND \$150 FOR WELDING.

- - - - - 25011 EVELETH AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.
--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.
--- LENGTH OF PROGRAM: THE WELDING PROGRAM IS 9 MONTHS LONG.

- - - - - 25012 FARIBAULT AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.
THE 'PRODUCTION MACHINING' PROGRAM PREPARES INDIVIDUALS TO SET UP AND OPERATE PRODUCTION MACHINE TOOLS. INSTRUCTION INCLUDES LATHES, GRINDERS, DRILL PRESSES, NUMERICAL CONTROL, MILLING MACHINES, SHAPERS, MATH AND MEASURING DEVICE USAGE, PRINT READING AND MACHINE THEORY.
THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.
--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.
--- LENGTH OF PROGRAM: THE MACHINE SHOP OPERATIONS PROGRAM IS 18 MONTHS LONG AND THE PRODUCTION MACHINING AND WELDING PROGRAMS ARE 9 MONTHS LONG.
--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR BOOKS AND SUPPLIES

ARE \$900 FOR MACHINE SHOP, \$672 FOR PRODUCTION MACHINING AND \$200 FOR WELDING.

- - - - - 25013 GRANITE FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION AND A DIPLOMA ARE OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

- - - - - 25014 HIBBING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CONSTRUCTION/MAINTENANCE IN METAL TRADES' PROGRAM IS A NEW OR REVISED PROGRAM FOR WHICH THERE WAS NO AVAILABLE DESCRIPTION AT THE UPDATE OF THIS EDITION OF MCIS. PLEASE CONTACT THE AVTI FOR INFORMATION ON THIS PROGRAM.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 21 MONTHS LONG.

- - - - - 25015 HUTCHINSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: STUDENTS WHO MEET ALL OF THE CORE REQUIREMENTS (COMPETENCIES) WILL RECEIVE A DEGREE PLUS A CERTIFICATE OF COMPETENCY.

--- LENGTH OF PROGRAM: THE MACHINE SHOP OPERATIONS PROGRAM IS 9 MONTHS LONG. THE WELDING COURSE LENGTH IS VARIABLE. THE INSTRUCTOR WILL MAKE THE DECISION TO RELEASE THE STUDENT BASED ON THE STUDENT'S WELDING TECHNIQUES.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$250 FOR SUPPLIES, TOOLS, SAFETY EQUIPMENT, BOOKS AND PROGRAM FEES. THE STUDENT HAS THE OPTION TO BUY TOOLS FOR \$150.

- - - - - 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'TOOL AND DIE MAKING' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THE PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE TOOL. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS,

BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS OFFERED.

--- LENGTH OF PROGRAM: MACHINE SHOP IS AN 84 WEEK PROGRAM AND THE TOOL AND DIE MAKING IS AN ADDITIONAL 24 WEEKS. THE COMBINATION WELDER PROGRAM IS 42 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$645 FOR TOOLS FOR THE MACHINE SHOP PROGRAM AND \$130 FOR WELDER.

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

THE 'METAL PATTERNMAKING' PROGRAM PREPARES INDIVIDUALS TO FIT, ASSEMBLE, AND HAND FINISH CASTINGS AND PARTS. INSTRUCTION INCLUDES THE MANUFACTURE OF METAL-FOUNDRY PATTERNS ACCORDING TO SPECIFICATIONS AND PATTERNMAKING METHODS.

THE 'SHEET METAL WORKING' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT OR INSTALL, AND MAINTAIN ITEMS MADE OF STEEL, COPPER, STAINLESS STEEL, AND ALUMINUM. HAND TOOLS AND MACHINES SUCH AS CORNICE BRAKES, FORMING ROLLS, AND SQUARING SHEERS ARE USED.

THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: MACHINE SHOP IS A 3-6 QUARTER PROGRAM, THE PATTERNMAKING AND SHEET METAL WORKING PROGRAMS ARE 7 QUARTER PROGRAMS AND WELDING IS A 4 QUARTER PROGRAM.

--- SPECIAL COSTS: COSTS WILL INCLUDE ABOUT \$55 FOR BOOKS, \$4 FOR SAFETY GLASSES, AND \$250 FOR SUPPLIES FOR MACHINE SHOP. COSTS FOR PATTERNMAKING ARE ABOUT \$25 FOR BOOKS, \$113.50 FOR TOOLS AND \$5 FOR SAFETY GLASSES. SHEET METAL COSTS ARE ABOUT \$55 FOR BOOKS, \$15 FOR TOOLS, \$4 FOR SAFETY GLASSES AND \$7 FOR SUPPLIES AND/OR UNIFORMS. COSTS FOR WELDING INCLUDE \$25 FOR BOOKS, \$35 FOR TOOLS, \$5 FOR SAFETY GLASSES AND \$56 FOR UNIFORMS AND SUPPLIES.

- - - - - 25019 MOORHEAD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THIS IS A 10 MONTH PROGRAM.

- - - - - 25020 PINE TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED TO THOSE WHO SUCCESSFULLY COMPLETE THESE PROGRAMS.

--- LENGTH OF PROGRAM: THE MACHINE SHOP PROGRAM TAKES 11 MONTHS TO COMPLETE. WELDING IS A 9 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE TEXTS, WORKBOOKS, AND KITS.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: MACHINE SHOP IS A 19 MONTH PROGRAM.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$680 FOR BOOKS AND TOOLS.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THE MACHINE SHOP PROGRAM TAKES 18 MONTHS TO COMPLETE. WELDING IS 9 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR WELDING WILL INCLUDE \$330 FOR TOOLS, SUPPLIES AND EQUIPMENT.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY

ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

THE 'SHEET METAL WORKING' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT OR INSTALL, AND MAINTAIN ITEMS MADE OF STEEL, COPPER, STAINLESS STEEL, AND ALUMINUM. HAND TOOLS AND MACHINES SUCH AS CORNICE BRAKES, FORMING ROLLS, AND SQUARING SHEERS ARE USED.

THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: MACHINE SHOP IS 18 MONTHS LONG. SHEET METAL AND WELDING ARE 9 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS ARE \$451.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

THE 'SHEET METAL WORKING' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT OR INSTALL, AND MAINTAIN ITEMS MADE OF STEEL, COPPER, STAINLESS STEEL, AND ALUMINUM. HAND TOOLS AND MACHINES SUCH AS CORNICE BRAKES, FORMING ROLLS, AND SQUARING SHEERS ARE USED.

THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: DIPLOMAS ARE AWARDED.

--- LENGTH OF PROGRAM: ALL PROGRAMS NORMALLY REQUIRE 18 MONTHS TO COMPLETE EXCEPT WELDING WHICH IS 11 MONTHS LONG. THE PROGRAMS START QUARTERLY.

- - - - - 25026 STAPLES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

--- DEGREES OFFERED: DIPLOMAS OR TRADE CERTIFICATES ARE AWARDED.

--- LENGTH OF PROGRAM: THE MACHINE SHOP PROGRAM TAKES 18 MONTHS.

--- SPECIAL COSTS: BOOKS, TOOLS, AND OTHER SUPPLIES ARE PROVIDED BY THE INSTITUTE REQUIRING A RENTAL FEE OF \$25 PER YEAR.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY

ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

THE 'SHEET METAL WORKING' PROGRAM PREPARES INDIVIDUALS TO LAY OUT, FABRICATE, ERECT OR INSTALL, AND MAINTAIN ITEMS MADE OF STEEL, COPPER, STAINLESS STEEL, AND ALUMINUM. HAND TOOLS AND MACHINES SUCH AS CORNICE BRAKES, FORMING ROLLS, AND SQUARING SHEERS ARE USED.

THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: DIPLOMAS OF RECOGNITION ARE OFFERED.

--- LENGTH OF PROGRAM: THE MACHINE SHOP PROGRAM IS 11-21 MONTHS LONG. THE SHEET METAL PROGRAM IS 12-18 MONTHS LONG. THE WELDING IS FROM 6-18 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR BOOKS AND SUPPLIES ARE \$151 FOR MACHINE SHOP, \$125 FOR SHEET METAL AND \$132 FOR WELDING.

- - - - - 25028 THIEF RIVER FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: DEGREES OF OCCUPATIONAL PROFICIENCY ARE AWARDED.

--- LENGTH OF PROGRAM: THE PROGRAM LASTS 13 MONTHS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE APPROXIMATELY \$160 FOR BOOKS, SUPPLIES, TOOLS AND COVERALLS.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OR A CERTIFICATE IS AWARDED.

--- LENGTH OF PROGRAM: THE WELDING PROGRAM TAKES 9-18 MONTHS TO COMPLETE. THE MACHINE SHOP IS AN 18 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$400 FOR BOOKS EXCEPT FOR WELDING WHICH IS \$285 (ALL USABLE BOOKS ARE BOUGHT BACK AT 70 PERCENT OF PAID PRICE) AND TOOLS.

- - - - - 25031 WINONA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MACHINE SHOP OPERATIONS' PROGRAM PREPARES INDIVIDUALS TO SHAPE METAL PARTS ON MACHINES SUCH AS LATHES, GRINDERS, DRILL PRESSES, MILLING MACHINES, AND SHAPERS. THIS PROGRAM MAY ALSO TRAIN INDIVIDUALS IN THE USE OF ONE MACHINE. INSTRUCTION INCLUDES MAKING COMPUTATIONS RELATED TO WORK DIMENSIONS; TESTING FEEDS AND SPEEDS OF

MACHINES USING PRECISION MEASURING INSTRUMENTS SUCH AS LAYOUT TOOLS, MICROMETERS, AND GAUGES; MACHINING AND HEAT-TREATING VARIOUS METALS; AND LAYING OUT MACHINE PARTS.

THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: MACHINE SHOP IS AN 18 MONTH PROGRAM. WELDING IS 9 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$325 FOR TOOLS AND \$13 FOR BOOKS AND SUPPLIES FOR MACHINE SHOP AND \$45 FOR TOOLS, \$75 FOR UNIFORMS AND \$80 FOR BOOKS AND SUPPLIES FOR WELDING.

- - - - - 25032 EAST GRAND FORKS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE WELDING PROGRAM IS 10 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS, SUPPLIES, EQUIPMENT.

- - - - - 25033 RED WING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'WELDING OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO USE GASES AND/OR WELDING PROCESSES TO BRAZE AND SOLDER METAL PARTS ACCORDING TO DIAGRAMS, BLUEPRINTS, OR WRITTEN SPECIFICATIONS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: WELDING IS A 9 MONTH PROGRAM.

- - - - - 27144 ITASCA COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'WELDING' PROGRAM PROVIDES A VARIETY OF WELDING TECHNIQUES IN THE WELDING OF FERROUS AND NON-FERROUS METALS, AND APPROVED SKILLS ENABLING GRADUATES TO PERFORM SATISFACTORILY IN THE NUMEROUS EMPLOYMENT OPPORTUNITIES AVAILABLE IN AND OUT OF THE COLLEGE AREA. QUALIFIED STUDENTS MAY TAKE THE ITASCA COMMUNITY COLLEGE TEST FOR CERTIFICATION PRIOR TO GRADUATION. CREDITS EARNED MAY BE APPLIED TOWARD AN ASSOCIATE IN APPLIED SCIENCE DEGREE.

--- DEGREES OFFERED: A VOCATIONAL CERTIFICATE IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM REQUIRES 53 CREDITS.

- - - - - 82009 DUNWOODY INDUSTRIAL INSTITUTE

---OBJECTIVES OF THE PROGRAM: THE 'MACHINE-TOOL, DIE AND MOLD MAKING' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR ENTRY LEVEL EMPLOYMENT, AND TO SUPPORT RAPID ADVANCEMENT IN GENERAL MACHINING, NC AND CNC MACHINING, TOOL MAKING OR DIE AND MOLD MAKING. EACH UNIT CONSISTS OF HAND-ON SHOP TRAINING AND RELATED CLASSROOM INSTRUCTION. TWO OPTIONS IN ADVANCED UNITS OFFERS SPECIALIZATION IN TOOL MAKING OR IN DIE AND MOLD MAKING.

THE 'SHEET METAL' PROGRAM TRAINS STUDENTS IN THE DESIGN, FABRICATION, AND SERVICE OF HEATING, VENTILATING AND AIR CONDITIONING INSTALLATIONS. RELATED CLASSROOM STUDIES AND SHOP COURSES ARE TAKEN.

THE 'WELDING' PROGRAM PROVIDES THOROUGH, BASIC TRAINING IN THE WELDING AND CUTTING PROCESSES USED IN INDUSTRY. THESE PROCESSES INCLUDE ARC WELDING, OXY-ACETYLENE WELDING AND CUTTING, INERT GAS ARC WELDING, AND SUBMERGED ARC WELDING. STUDENTS LEARN TO APPLY THESE PROCESSES ON VARIOUS STEELS AND

ALLOYS. ALSO, THE STUDENTS RECEIVE INSTRUCTION AND PRACTICE IN DRAWING, BLUEPRINT READING, PIPE LAYOUT, PLATE FABRICATION LAYOUT, DESIGN AND CONSTRUCTION OF JIGS AND FIXTURES, SOLVING EXPANSION AND CONTRACTION PROBLEMS, BASIC METALLOGRAPHY, SHOP MANAGEMENT AND COST ESTIMATING.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED FOR EACH OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE 18 TRAINING PERIODS, OF 4 WEEKS EACH, FOR A TOTAL OF 72 WEEKS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE SAFETY GLASSES.

297 HEATING AND COOLING MECHANICS

Programs in heating and cooling mechanics are designed to prepare individuals to maintain and repair home and commercial heating and cooling systems. Students learn heating, air conditioning, and refrigeration theory, and study the design and construction of the equipment. Most heating and cooling programs, ranging in length from six-month certificate colleges and private trade schools. Apprenticeships are also available (see PROG 631).

---PROGRAM ADMISSION: A high school diploma or its equivalent is normally required.

---TYPICAL COURSE WORK: Course work includes lectures, technical reading, and laboratory work. Courses vary but most programs include:

Electricity Theory and Lab	Heating Principles
Air Conditioning Equipment	Heating Equipment
Theory and Lab	Systems Design
Thermodynamics	Control Systems

In two-year programs students also take courses in English, math, and physical sciences..

---GRADUATION REQUIREMENTS: Requirements vary with school and length of program. See school catalogs for more information.

---THINGS TO KNOW: Many schools offer both day and evening classes in heating and cooling mechanics. In some programs students are required to buy their own tools.

---RELATED PROGRAMS: PROG 287 Industrial Mechanics, 295 Metalworking.

---DIRECTLY RELATED OCCUPATIONS: DESC 3146 Air Conditioning/Refrigeration Mechanics.

ASSOCIATED OCCUPATIONS: DESC 3169 Appliance Repairers, 4272 Plumbers/Pipefitters, 5626 Electricians, 5484 Sheet Metal Workers.

CIPS: 47.02
15.0501

SCHOOLS:

- - - - - 25001 ALBERT LEA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HEATING, AIR CONDITIONING, AND REFRIGERATION' PROGRAM PREPARES INDIVIDUALS TO INSTALL, REPAIR AND MAINTAIN THE OPERATING CONDITION OF RESIDENTIAL AND COMMERCIAL HEATING, AIR CONDITIONING, AND REFRIGERATING SYSTEMS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 20 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$200 FOR THE FIRST YEAR AND \$190 FOR THE SECOND YEAR.

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BUILDING UTILITIES MECHANIC' PROGRAM PREPARES INDIVIDUALS TO OPERATE, MAINTAIN AND REPAIR MECHANICAL AND ELECTRICAL EQUIPMENT, BOILERS, TEMPERATURE CONTROLS SYSTEMS AND AIR-

REFRIGERATION SYSTEMS IN COMMERCIAL BUILDINGS.

- DEGREES OFFERED: A DIPLOMA IS OFFERED.
- LENGTH OF PROGRAM: THIS PROGRAM IS 19 1/2 MONTHS LONG.
- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$50 FOR BOOKS, \$200 FOR TOOLS AND SUPPLIES, AND \$25 FOR LAB FEES.

--- 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HEATING, AIR CONDITIONING, AND REFRIGERATION' PROGRAM PREPARES INDIVIDUALS TO INSTALL, REPAIR AND MAINTAIN THE OPERATING CONDITION OF RESIDENTIAL AND COMMERCIAL HEATING, AIR CONDITIONING, AND REFRIGERATING SYSTEMS.

- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS AWARDED.
- LENGTH OF PROGRAM: THIS IS AN 84 WEEK PROGRAM.
- SPECIAL COSTS: COSTS INCLUDE \$225 FOR EQUIPMENT AND SUPPLIES.

--- 25019 MOORHEAD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HEATING, AIR CONDITIONING, AND REFRIGERATION' PROGRAM PREPARES INDIVIDUALS TO INSTALL, REPAIR AND MAINTAIN THE OPERATING CONDITION OF RESIDENTIAL AND COMMERCIAL HEATING, AIR CONDITIONING, AND REFRIGERATING SYSTEMS.

- DEGREES OFFERED: A DIPLOMA IS AWARDED.
- LENGTH OF PROGRAM: THIS IS A 20 MONTH PROGRAM.

--- 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BUILDING UTILITIES MECHANIC' PROGRAM PREPARES INDIVIDUALS TO OPERATE, MAINTAIN AND REPAIR MECHANICAL AND ELECTRICAL EQUIPMENT, BOILERS, TEMPERATURE CONTROLS SYSTEMS AND AIR-REFRIGERATION SYSTEMS IN COMMERCIAL BUILDINGS.

THE 'HEATING, AIR CONDITIONING, AND REFRIGERATION' PROGRAM PREPARES INDIVIDUALS TO INSTALL, REPAIR AND MAINTAIN THE OPERATING CONDITION OF RESIDENTIAL AND COMMERCIAL HEATING, AIR CONDITIONING, AND REFRIGERATING SYSTEMS.

THE 'MOBILE HOME MAINTENANCE' PROGRAM PREPARES INDIVIDUALS TO KEEP MOBILE HOMES FUNCTIONING. INSTRUCTION INCLUDES THE BASIC MAINTENANCE AND REPAIR SKILLS IN AIR CONDITIONING, HEATING, PLUMBING, ELECTRICAL, AND OTHER MECHANICAL SYSTEMS. INSTRUCTION INCLUDES INSTALLATION, DELIVERY, SET-UP, AND BUILDING CODES AND STANDARDS.

- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED TO STUDENTS WHO SUCCESSFULLY COMPLETE EACH PROGRAM.
- LENGTH OF PROGRAM: HEATING, AIR CONDITIONING AND REFRIGERATION AND BUILDING UTILITIES MECHANIC PROGRAMS ARE 19 MONTHS LONG. THE MOBILE HOME PROGRAM IS 16 MONTHS LONG.
- SPECIAL COSTS: COSTS WILL INCLUDE BOOKS, SUPPLIES AND EQUIPMENT.

--- 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BUILDING UTILITIES MECHANIC' PROGRAM PREPARES INDIVIDUALS TO OPERATE, MAINTAIN AND REPAIR MECHANICAL AND ELECTRICAL EQUIPMENT, BOILERS, TEMPERATURE CONTROLS SYSTEMS AND AIR-REFRIGERATION SYSTEMS IN COMMERCIAL BUILDINGS.

- DEGREES OFFERED: A DIPLOMA IS AWARDED TO STUDENTS WHO SUCCESSFULLY COMPLETE EACH PROGRAM.
- LENGTH OF PROGRAM: THE BUILDING UTILITIES MECHANICS PROGRAM TAKES TWO YEARS TO COMPLETE.
- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$600 THE FIRST YEAR AND \$280 THE SECOND YEAR FOR BOOK, TOOLS AND EQUIPMENT.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HEATING, AIR CONDITIONING, AND REFRIGERATION' PROGRAM PREPARES INDIVIDUALS TO INSTALL, REPAIR AND MAINTAIN THE OPERATING CONDITION OF RESIDENTIAL AND COMMERCIAL HEATING, AIR CONDITIONING, AND REFRIGERATING SYSTEMS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 9 MONTHS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$400 FOR BOOKS AND SUPPLIES.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'HEATING, AIR CONDITIONING, AND REFRIGERATION' PROGRAM PREPARES INDIVIDUALS TO INSTALL, REPAIR AND MAINTAIN THE OPERATING CONDITION OF RESIDENTIAL AND COMMERCIAL HEATING, AIR CONDITIONING, AND REFRIGERATING SYSTEMS.

--- DEGREES OFFERED: DIPLOMAS OF RECOGNITION ARE OFFERED IN THIS PROGRAM.

--- LENGTH OF PROGRAM: THE PROGRAM IS 12-24 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR BOOKS AND SUPPLIES ARE \$300.

- - - - - 25033 RED WING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HEATING, AIR CONDITIONING, AND REFRIGERATION' PROGRAM PREPARES INDIVIDUALS TO INSTALL, REPAIR AND MAINTAIN THE OPERATING CONDITION OF RESIDENTIAL AND COMMERCIAL HEATING, AIR CONDITIONING, AND REFRIGERATING SYSTEMS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: HEATING, AIR CONDITIONING, AND REFRIGERATION IS AN 18 MONTH PROGRAM.

- - - - - 82009 DUNWOODY INDUSTRIAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'REFRIGERATION AND APPLIANCE' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR CAREERS IN THE FIELD OF REFRIGERATION, APPLIANCE, AND AIR CONDITIONING SERVICE TRADES.

THE 'ENVIRONMENTAL SYSTEMS DESIGN TECHNOLOGY' PROGRAM IS DESIGNED TO TRAIN STUDENTS IN HEATING, COOLING, VENTILATING, AND MECHANICAL EQUIPMENT, SERVICE, DESIGN, LAYOUT, ESTIMATION, AND BALANCING. RELATED CLASSROOM STUDIES AND SHOP COURSES ARE OFFERED.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED FOR EACH OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THESE PROGRAMS CONSIST OF 18 TRAINING PERIODS, EACH 4 WEEKS LONG, FOR A TOTAL OF 72 WEEKS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE SAFETY GLASSES.

Precision production programs intend to teach skills necessary for the manufacture and/or repair of products that have very precise specifications. These products may be made with a variety of materials including ceramics, precious stones, metals, glass, and plastic. Programs vary depending on the product and the processes used in producing the product. They may be designed to teach people to make and repair jewelry, camera equipment, and other optical products, or to mold and cast plastic products.

Programs range from six-month certificate programs to two-year associate degree programs. They are offered by trade schools and public vocational schools. Three- and four-year apprenticeship programs are available to train people for many precision production occupations.

---PROGRAM ADMISSION: Requirements vary with particular programs. A background in geometry, algebra, and chemistry may be helpful. Mechanical drawing and design courses are recommended for jewelry making programs.

---TYPICAL COURSE WORK: Most programs include many hours of practical laboratory experience. Other course work may include:

Shop Practices
Characteristics of Materials
Design

---GRADUATION REQUIREMENTS: Requirements vary with program. See school catalogs for more information.

---RELATED PROGRAMS: PROG 311 Art, 283 Instrument Repair.

---DIRECTLY RELATED OCCUPATIONS: DESC 3184 Jewelers.

CIPS: 48.06
48.99
50.0206

SCHOOLS:

----- 25011 EVELETH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'INSTRUMENTATION TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO DESIGN AND DEVELOP PROTOTYPES, TEST AND EVALUATE CONTROL OR MEASUREMENT DEVICES IN SYSTEMS, AND PREPARE GRAPHS, WRITTEN REPORTS AND TEST RESULTS IN SUPPORT OF THE PROFESSIONAL PERSONNEL WORKING IN THE FIELD OF INSTRUMENTATION. INSTRUCTION INCLUDES THE FIELDS OF ELECTRICITY, ELECTRONICS, MECHANICS, PNEUMATICS, AND HYDRAULICS AS THEY PERTAIN TO THE PRINCIPLES OF CONTROL, RECORDING SYSTEMS, AUTOMATED DEVICES, AND THE CALIBRATION OF INSTRUMENTATION UNITS OR SYSTEMS. THE ABILITY TO MONITOR, TROUBLESHOOT, MAINTAIN AND REPAIR SPECIFIC INSTRUMENTS AS THEY RELATE TO AUTOMATED CONTROL SYSTEMS IS INCLUDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

----- 25018 MINNEAPOLIS TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'JEWELRY DESIGN, FABRICATION, AND REPAIR' PROGRAM PREPARES INDIVIDUALS TO DESIGN, FABRICATE, AND REPAIR JEWELRY ARTICLES SUCH AS RINGS, BROOCHES, PENDANTS, BRACELETS, AND LOCKETS.

INSTRUCTION INCLUDES MODELMAKING, CASTING, ENGRAVING, POLISHING, STONESETTING, FITTING RINGS, SOLDERING BROKEN PARTS, RESHAPING AND RESTYLING OLD JEWELRY, AND USING SPECIAL JEWELER'S HAND TOOLS AND MACHINES.
--- DEGREES OFFERED: A DIPLOMA IS AWARDED TO STUDENTS WHO COMPLETE THIS PROGRAM.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES 5 QUARTERS TO COMPLETE.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR JEWELRY WILL INCLUDE ABOUT \$20 FOR BOOKS AND \$150 FOR SUPPLIES.

- - - - - 25021 PIPESTONE AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PLASTICS' PROGRAM PREPARES INDIVIDUALS TO MOLD AND CAST PLASTIC PARTS, PATTERNS, AND PROTOTYPE PARTS; FIT, FABRICATE, AND REPAIR INTERNAL CARVINGS; FINISH PLASTIC PARTS; AND ASSEMBLE PLASTIC COMPONENTS INTO PRODUCTS.

--- DEGREES OFFERED: THOSE WHO COMPLETE THIS COURSE AND BECOME EMPLOYED WILL RECEIVE A CERTIFICATE OF OCCUPATIONAL PROFICIENCY. OTHERS MAY ACHIEVE A DIPLOMA.

--- LENGTH OF PROGRAM: THE COURSE TAKES 11 MONTHS TO COMPLETE.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE ABOUT \$35 FOR TOOLS AND SUPPLIES.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'INSTRUMENTATION TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO DESIGN AND DEVELOP PROTOTYPES, TEST AND EVALUATE CONTROL OR MEASUREMENT DEVICES IN SYSTEMS, AND PREPARE GRAPHS, WRITTEN REPORTS AND TEST RESULTS IN SUPPORT OF THE PROFESSIONAL PERSONNEL WORKING IN THE FIELD OF INSTRUMENTATION. INSTRUCTION INCLUDES THE FIELDS OF ELECTRICITY, ELECTRONICS, MECHANICS, PNEUMATICS, AND HYDRAULICS AS THEY PERTAIN TO THE PRINCIPLES OF CONTROL, RECORDING SYSTEMS, AUTOMATED DEVICES, AND THE CALIBRATION OF INSTRUMENTATION UNITS OR SYSTEMS. THE ABILITY TO MONITOR, TROUBLESHOOT, MAINTAIN AND REPAIR SPECIFIC INSTRUMENTS AS THEY RELATE TO AUTOMATED CONTROL SYSTEMS IS INCLUDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'PLASTICS' PROGRAM PREPARES INDIVIDUALS TO MOLD AND CAST PLASTIC PARTS, PATTERNS, AND PROTOTYPE PARTS; FIT, FABRICATE, AND REPAIR INTERNAL CARVINGS; FINISH PLASTIC PARTS; AND ASSEMBLE PLASTIC COMPONENTS INTO PRODUCTS.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 12 - 22 MONTHS LONG.

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'PLASTICS TECHNOLOGY' PROGRAM IS OFFERED JOINTLY WITH THE SUBURBAN HENNEPIN COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE. GENERAL EDUCATION COURSES IN MATH, CHEMISTRY, PSYCHOLOGY, ECONOMICS, ENGLISH, AND SPEECH ARE OFFERED AT NORTH HENNEPIN. THE TECHNICAL COURSES IN PLASTICS AND TAKEN AT THE AVTI.

--- DEGREES OFFERED: UPON COMPLETION OF THIS PROGRAM, STUDENTS RECEIVE AN ASSOCIATE IN APPLIED SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM. ONE YEAR IS SPENT AT NORTH HENNEPIN AND ONE YEAR AT THE SUBURBAN HENNEPIN COUNTY AVTI.

Art is the study of visual forms as a means of expression. Programs in art intend to develop knowledge and skills in areas such as painting, drawing, sculpture, ceramics, weaving, art history, computer graphics and visual communications. These programs are designed to prepare students for careers in art, education, business, and industry. Four-year colleges offer bachelor's, master's, and doctoral degree programs. Community colleges offer one-year certificates and two-year associate degree programs. Private professional schools also offer certificate programs which vary in length from six months to four years. Students completing the necessary education courses at four-year colleges may also be certified as teachers.

---PROGRAM ADMISSION: Some programs in art require a portfolio or slides. See individual catalogs for more information.

---TYPICAL COURSE WORK: Course work in art varies depending on the subject area. Art history, art education, and art therapy course work includes lectures, discussions, outside reading, and research papers. Course work in the fine arts usually consists of individualized projects in a studio environment. Most programs include courses in:

History of Art	Visual Theory
Painting	Basic Design
Drawing	Color
Ceramics	Sculpture

---GRADUATION REQUIREMENTS: Requirements vary with the school and the length of the program. See college catalogs for more information.

---THINGS TO KNOW: The job market is very competitive. While in school, students should develop a portfolio of work demonstrating skill and creative thinking.

---RELATED PROGRAMS: PROG 318 Printing and Graphics, 317 Photographic Arts, 131 Architecture and Environmental Design, 314 Music, 316 Dramatic Arts, 236 Secondary Education (for art education), 367 Rehabilitation Services (for art therapy).

---DIRECTLY RELATED OCCUPATIONS: DESC 9869 Artists, 8453 Elementary School Teachers, 8457 Secondary School Teachers, 8454 University and College Teachers.

ASSOCIATED OCCUPATIONS: DESC 4734 Photographers, 4441 Clothes Designers, 2366 Interior Designers and Decorators, 4728 Commercial Artists, 8443 Recreational Therapists.

CIPS: 50.07
50.02
50.04 (except 50.0402)
50.99

SCHOOLS:

--- 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'SIGN PAINTING' PROGRAM PREPARES

INDIVIDUALS TO DESIGN AND PAINT SIGNS. INSTRUCTION INCLUDES LAYOUT AND DESIGN, LETTERING TECHNIQUES, COLOR SCHEMES, CONSTRUCTION AND ENTREPRENEURIAL SKILLS.

--- LENGTH OF PROGRAM: THIS PROGRAM IS NINE MONTHS LONG.

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: SEVERAL TYPES OF 'ART' PROGRAMS ARE OFFERED. THE COLLEGE OF LIBERAL ARTS OFFERS AN 'ART HISTORY' PROGRAM FOR THOSE WHO WANT TO STUDY THE HISTORY OF THE VISUAL ARTS. THE 'STUDIO ARTS' PROGRAM IS ALSO OFFERED THROUGH C.L.A. THIS PROGRAM PROVIDES INSTRUCTION IN THE VARIOUS ARTS. BOTH OF THESE PROGRAMS ARE ALSO OFFERED THROUGH EXTENSION CLASSES. THE COLLEGE OF HOME ECONOMICS OFFERS AN 'APPLIED DESIGN' PROGRAM IN WHICH STUDENTS MAY CHOOSE A 'VISUAL COMMUNICATIONS' OR 'CRAFTS (TEXTILES AND JEWELRY)' OPTION. COSTUME DESIGN AND INTERIOR DESIGN PROGRAMS ARE ALSO AVAILABLE IN THE COLLEGE OF HOME ECONOMICS. THOSE WHO WANT TO TEACH ART ENTER THE 'ART EDUCATION' PROGRAM IN THE COLLEGE OF EDUCATION AFTER 1 YEAR OF LIBERAL ARTS STUDY. CONTINUING EDUCATION AND EXTENSION OFFERS A 'COMMERCIAL ART CERTIFICATE' PROGRAM WITH EITHER A LAY-OUT OR ILLUSTRATION EMPHASIS.

--- DEGREES OFFERED: THE BACHELOR OF ARTS, MASTER OF ARTS, AND DOCTOR OF PHILOSOPHY DEGREES ARE OFFERED IN ART HISTORY. AN M.A. DEGREE IN MUSEOLOGY IS ALSO OFFERED. STUDIO ARTS MAJORS MAY EARN THE B.A., BACHELOR OF FINE ARTS, AND MASTER OF FINE ARTS DEGREES. BACHELOR OF SCIENCE DEGREES ARE OFFERED IN APPLIED DESIGN, COSTUME DESIGN, INTERIOR DESIGN AND ART EDUCATION. IN ADDITION, ART EDUCATION STUDENTS MAY EARN THE M.A. OR MASTER OF EDUCATION DEGREE. COMMERCIAL ART, COORDINATED THROUGH HOME ECONOMICS, IS A CERTIFICATE PROGRAM, WHICH MAY ALSO BE USED AS A SUPPORTING FIELD IN APPLIED DESIGN.

- - - - - 82002 ART INSTRUCTION SCHOOLS INC.

--- OBJECTIVES OF THE PROGRAM: THE ART' PROGRAM CONSISTS OF TWO PARTS: FUNDAMENTALS OF ART AND SPECIALIZED ART. THIS PROGRAM IS OFFERED THROUGH HOME STUDY ONLY. EACH PART OF THE EDUCATIONAL PROGRAM CONSISTS OF 27 LESSONS, WHICH ARE INTENDED TO HELP STUDENTS IMPROVE THEIR UNDERSTANDING OF AND APPRECIATION FOR ART AND DEVELOP THEIR ART ABILITIES. THIS IS NOT A CAREER ORIENTED PROGRAM. COURSE WORK INCLUDES: LINE DRAWING, BASIC SHAPES, FORM AND STRUCTURE, DESIGN, SHADING, COLOR, PERSPECTIVE, TEXTURE, INK DRAWING, LETTERING, AND PAINTING. FUNDAMENTALS OF ART IS A PREREQUISITE FOR SPECIALIZED ART. THE AMERICAN COUNCIL ON EDUCATION, WASHINGTON, DC, HAS REVIEWED ART INSTRUCTION SCHOOLS' PROGRAMS AND HAS MADE CREDIT RECOMMENDATIONS TO ACCREDITED COLLEGES AND UNIVERSITIES THROUGHOUT THE UNITED STATES. TO QUALIFY FOR THE CREDIT RECOMMENDATIONS A STUDENT MUST SATISFACTORILY COMPLETE THE ASSIGNMENTS AND A PROCTORED EXAM. IT IS UP TO EACH INDIVIDUAL COLLEGE TO DECIDE IF IT WILL GRANT CREDIT FOR THESE COURSES AND IN WHAT AMOUNT.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS AWARDED UPON COMPLETION OF THE FUNDAMENTALS PROGRAM. A CERTIFICATE OF GRADUATION IS AWARDED UPON COMPLETION.

- - - - - 84014 NORTHWESTERN COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'COMMERCIAL ART' AND 'ART' PROGRAMS ARE DESIGNED TO GIVE STUDENTS A FOUNDATION OF KNOWLEDGE AND SKILLS NECESSARY FOR A CAREER IN THE FIELD. STUDENTS ARE REQUIRED TO TAKE A 1 YEAR COURSE

IN THE BIBLE. THIS INCLUDES HISTORY AND LITERATURE OF THE BIBLE AND DOCTRINE.

--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE, VOCATIONAL STUDIES, AND BIBLE IN COMMERCIAL ART, BACHELOR OF ARTS, AND BACHELOR OF SCIENCE DEGREE ARE OFFERED IN BOTH COMMERCIAL ART AND FINE ART.

Programs in music are designed to prepare students for careers as performers, teachers of music, and music therapists, or to provide preparation for further study. Students can major in various specialty areas such as music theory and history, music composition, music performance (instrument and voice), music education, and music therapy. Some community colleges offer training leading to the associate degree, or they offer the first two years of degree requirements which may be transferred to a four-year college. Most colleges offer bachelor's degree programs in music, although each school will not necessarily offer every specialty (see college catalogs for details). Some universities offer master's and doctoral degree programs.

---PROGRAM ADMISSION: Some programs require students who wish to major in music to audition in their performance area.

---TYPICAL COURSE WORK: Instruction consists of lectures and seminars in theory and history courses. Performance courses are usually individualized, emphasizing voice instruction or experience in playing an instrument. Clinical field work is included in music therapy courses. Course work varies, but most programs include the following:

Introduction to Music	Physics of Music/Sound
Music Theory	Applied Music
Composition	Instrument
History of Music	Specialization
Music Fundamentals	

Other requirements may include courses in the humanities and in the sciences. Some music majors also take courses to be certified as teachers. Students studying music therapy take courses in music therapy, psychology, sociology, and anthropology.

---GRADUATION REQUIREMENTS: Some programs require students to present a satisfactory senior recital before being approved for graduation.

---THINGS TO KNOW: The study of music requires extensive practice. Music majors usually participate in bands, orchestras, and recital groups. Some schools require students majoring in music to give frequent recitals. (See college catalogs for more information.)

---RELATED PROGRAMS: PROG 316 Dramatic Arts, 311 Art, 234 Early Childhood and Elementary Education, 236 Secondary Education, 367 Rehabilitation Services (for music therapy).

---DIRECTLY RELATED OCCUPATIONS: DESC 9869 Artists, 8453 Elementary School Teachers, 8457 Secondary School Teachers, 8454 University and College Teachers.

ASSOCIATED OCCUPATION: 8443 Recreation Therapists.

---REFERENCES: For a list of schools that have accredited music programs, contact:

National Association of Schools of Music
11250 Roger Bacon Drive, Number 5
Reston, VA 22090

CIPS: 50.09

SCHOOLS:

- - - - - 84016 COLLEGE OF SAINT BENEDICT

--- OBJECTIVES OF THE PROGRAM: THE 'MUSIC' PROGRAM OFFERS AN EMPHASIS IN 'MUSIC EDUCATION (INSTRUMENTAL OR CHORAL, ELEMENTARY AND/OR SECONDARY)', 'LITERATURE', 'LITURGICAL MUSIC', 'MUSIC COMPOSITION', OR 'PERFORMANCE'. AREAS OF STUDY INCLUDE PIANO, VOICE, ORGAN, BRASS, WOODWINDS, STRINGS, PERCUSSION, GUITAR AND LUTE. STUDENTS WHO WISH TO BECOME TEACHERS MUST ALSO COMPLETE THE SECONDARY EDUCATION REQUIREMENTS.

--- DEGREES OFFERED: AN ASSOCIATE OF ARTS DEGREE AND A BACHELOR OF ARTS DEGREE ARE OFFERED IN ALL OF THE AREAS OF EMPHASIS. A BACHELOR OF MUSIC DEGREE IS ALSO OFFERED IN PERFORMANCE.

317 PHOTOGRAPHIC ARTS

Photographic arts programs intend to provide skills in still and motion-picture camera use and maintenance, and all aspects of film exposure and development. Some programs also emphasize design principles and the history of photography and/or cinema. Photographic arts programs intend to prepare people as free-lance photographers, studio photographers, graphic arts photographers, and motion picture photographers. Many two- and four-year colleges and universities offer photographic arts programs. They vary from two-year associate degree programs offered by community colleges that concentrate on photographic techniques, to graduate programs offered by universities and institutes that focus on advanced photographic technology and theory. Photographic arts programs usually are offered through art and journalism departments, but some universities and institutes have separate departments devoted to film, television, and photography programs.

---PROGRAM ADMISSION: Enrollment in photographic arts programs, especially in four-year and graduate programs, may be limited. Some schools require completion of general liberal arts courses before students are admitted to a degree program. Graduate programs usually require early application, letters of recommendation, and a portfolio containing samples of the applicant's photographic and graphic design work. See school catalogs or contact the individual schools for admission deadlines and procedures.

---TYPICAL COURSE WORK: Most photographic arts programs include small classes, individualized instruction, laboratory work, and independent projects. Programs vary depending on whether they emphasize still photography, motion-picture photography, or television photography; but most include all or some of the following courses:

Design	Advanced Photography
Drawing	Animation
Typography	Film Editing
Photojournalism	Film Production
Small Business Management	Television Production
Basic Photography	

---GRADUATION REQUIREMENTS: Requirements vary with school, specialty, and length of program. See college catalogs for additional information.

---THINGS TO KNOW: The job market for motion-picture and still photographers is very competitive. While still in school, students should develop a portfolio that demonstrates their photographic talents and experience.

---RELATED PROGRAMS: PROG 196 Communication Technologies, 193 Journalism and Communications, 311 Art, 318 Printing and Graphics, 319 Modeling.

---DIRECTLY RELATED OCCUPATIONS: DESC 4734 Photographers.

ASSOCIATED OCCUPATIONS: DESC 4728 Commercial Artists, 4767 Printing Press Operators, 4762 Photofinishers.

CIPS: 50.06

SCHOOLS:

----- 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'PHOTOGRAPHIC LABORATORY AND DARKROOM' PROGRAM PREPARES INDIVIDUALS TO DEVELOP AND PRINT PHOTOGRAPHY STILL OR MOTION PICTURE FILM; CONTROL RESULTANT PRINTS; TOUCHUP NEGATIVES; AND FINISH, COLOR, RESTORE, AND COPY FILM.
--- DEGREE OFFERED: CERTIFICATES AND DEGREES OF OCCUPATIONAL PROFICIENCY ARE OFFERED.
--- LENGTH OF PROGRAM: THIS PROGRAM IS 22 MONTHS LONG.

----- 25027 HENNEPIN TECHNICAL CENTERS
--- OBJECTIVES OF THE PROGRAM: THE 'COMMERCIAL PHOTOGRAPHY' PROGRAM PREPARES INDIVIDUALS TO USE CAMERAS AND LABORATORY FILM-PROCESSING TECHNIQUES. INSTRUCTION INCLUDES COMPOSITION AND COLOR DYNAMICS; CONTACT PRINTING ENLARGING; DEVELOPING FILM; USE OF AIR BRUSHES, CAMERAS, METERS, AND OTHER PHOTOGRAPHIC EQUIPMENT; PORTRAIT, COMMERCIAL AND INDUSTRY PHOTOGRAPHY; PROCESSING MICROFILM, AND PREPARING COPY FOR PRINTING OR OTHER GRAPHIC ARTS PROCESSING.
--- DEGREES OFFERED: A DIPLOMA OF RECOGNITION IS OFFERED.
--- LENGTH OF PROGRAM: THIS PROGRAM IS 12 MONTHS LONG.
--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$600 FOR BOOKS AND SUPPLIES.

----- 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'COMMERCIAL PHOTOGRAPHY' PROGRAM PREPARES INDIVIDUALS TO USE CAMERAS AND LABORATORY FILM-PROCESSING TECHNIQUES. INSTRUCTION INCLUDES COMPOSITION AND COLOR DYNAMICS; CONTACT PRINTING ENLARGING; DEVELOPING FILM; USE OF AIR BRUSHES, CAMERAS, METERS, AND OTHER PHOTOGRAPHIC EQUIPMENT; PORTRAIT, COMMERCIAL AND INDUSTRY PHOTOGRAPHY; PROCESSING MICROFILM, AND PREPARING COPY FOR PRINTING OR OTHER GRAPHIC ARTS PROCESSING.
--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OR A CERTIFICATE IS AWARDED.
--- LENGTH OF PROGRAM: THE PROGRAM LASTS 18 MONTHS.
--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$75 FOR BOOKS (ALL USABLE BOOKS ARE BOUGHT BACK AT 70 PERCENT OF PAID PRICE) AND \$850 FOR A CAMERA, AND \$50 PER QUARTER FOR LAB FEES.

----- 82087 SCHOOL OF COMMUNICATION ARTS
--- OBJECTIVES OF THE PROGRAM: THE 'PHOTOGRAPHY' PROGRAM AND THE 'MULTI-MEDIA' PROGRAM ARE DESIGNED TO DEVELOP A STUDENT'S SKILLS IN PHOTOGRAPHY AND AUDIO-VISUAL AND TO EQUIP A STUDENT TO UNDERSTAND THE LATEST TECHNOLOGY IN THE FIELD. COURSES INCLUDE PHOTOGRAPHIC PROCESSES, LIGHT AND LIGHTING, UNIT COLOR, AUDIO RECORDING - MIXING AND EDITING, COMPUTER PROGRAMMING, MARKETING, AND CREATIVE EXPRESSION.
--- DEGREE OFFERED: A DIPLOMA OF COMPLETION IS OFFERED.
--- LENGTH OF PROGRAM: BOTH PROGRAMS ARE EACH SIX MONTHS LONG.
--- SPECIAL COSTS: ALL STUDENTS MUST PROVIDE THEIR OWN 35MM CAMERA, AND A PROFESSIONAL LIGHT METER. A BUDGET OF \$600 IS ENCOURAGED FOR ADDITIONAL SUPPLIES FOR ASSIGNED WORK.

317 PHOTOGRAPHIC ARTS TRANSFER PROGRAMS:

- - - - - 27139 AUSTIN COMMUNITY COLLEGE
- - - - - 27140 BRAINERD COMMUNITY COLLEGE
- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27144 ITASCA COMMUNITY COLLEGE
- - - - - 27145 WILLMAR COMMUNITY COLLEGE
- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE
- - - - - 27147 VERMILION COMMUNITY COLLEGE
- - - - - 27148 ROCHESTER COMMUNITY COLLEGE
- - - - - 27149 NORTHLAND COMMUNITY COLLEGE
- - - - - 27150 MESABI COMMUNITY COLLEGE
- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE
- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE
- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE
- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE
- - - - - 27156 NORMANDALE COMMUNITY COLLEGE
- - - - - 27157 INVER HILLS COMMUNITY COLLEGE
- - - - - 83002 CROSIER SEMINARY JUNIOR COLLEGE
- - - - - 84013 NORTH CENTRAL BIBLE COLLEGE
- - - - - 84014 NORTHWESTERN COLLEGE
- - - - - 84015 PILLSBURY COLLEGE
- - - - - 84021 ST. PAUL BIBLE COLLEGE

Printing and graphics are the primary tools of commercial art. Printing and graphics programs intend to prepare people with skills such as offset printing, reproduction, type preparation and layout, graphic photography, lithography, binding, and other graphic arts related to the printing industry.

Many four-year colleges and universities offer bachelor's degree programs in art which allow for emphases in graphic arts. These skills may also be acquired through apprenticeship programs (see PROG 631). Some community colleges offer one-year certificate and two-year associate degree programs in printing and graphics.

---PROGRAM ADMISSION: A high school diploma or its equivalent is normally required for admission.

---TYPICAL COURSE WORK: Course work varies with the school, program length, and emphasis. Usually programs include all or most of the following:

Offset Reproduction	Press Operations
Letterpress	Shop Operations
Stock Characteristics	Ink
Binding	Graphic Photography
Stripping and Platemaking	

Instruction includes much practical printing experience. Two-year associate programs also usually require some general background courses such as English, mathematics, and history. See college catalogs for complete program descriptions.

---GRADUATION REQUIREMENTS: Requirements vary by specialty and length of program. See college catalogs for more information.

---THINGS TO KNOW: Many programs include the possibility for off-campus internships.

---RELATED PROGRAMS: PROG 317 Photographic Arts, 311 Art, 631 Apprenticeship Programs.

---DIRECTLY RELATED OCCUPATIONS: DESC 4767 Printing Press Operators, 4728 Commercial Artists.

ASSOCIATED OCCUPATION: DESC 9869 Artists.

CIPS: 48.02
50.08
50.0402

SCHOOLS:

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'COMMERCIAL ART' PROGRAM PREPARES INDIVIDUALS TO DESIGN AND EXECUTE LAYOUTS AND MAKE ILLUSTRATIONS FOR ADVERTISING DISPLAYS AND INSTRUCTIONAL MANUALS. INSTRUCTION INCLUDES THE PREPARATION OF COPY; LETTERING, POSTER, PACKAGE, AND PRODUCT DESIGN; FASHION ILLUSTRATION; SILK SCREENING; AIR BRUSHING; AND INKS AND COLOR DYNAMICS.

--- DEGREES OFFERED: A DIPLOMA IN COMMERCIAL ART IS OFFERED.

- LENGTH OF PROGRAM: THE COMMERCIAL ART PROGRAM IS 18 MONTHS LONG.
- SPECIAL COSTS: COSTS WILL INCLUDE \$180 PER YEAR FOR BOOKS AND SUPPLIES.

- - - - - 25004 AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GRAPHIC AND PRINTING COMMUNICATIONS, GENERAL' PROGRAM TRAINS INDIVIDUALS IN THE GENERAL APPROACHES AND TECHNIQUES USED IN THE VARIOUS GRAPHIC AND PRINTING COMMUNICATIONS SPECIALTIES. INSTRUCTION INCLUDES BOOKBINDING; COMMERCIAL ART; COMMERCIAL PHOTOGRAPHY; COMPOSITION, MAKE-UP, AND TYPESETTING; LITHOGRAPHY; PHOTOGRAPHY, PLATE MAKING; PHOTOGRAPHIC LAB AND DARKROOM; PRINTING PRESS OPERATIONS; AND SILK SCREEN MAKING AND PRINTING.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY AND A CLOCK HOUR CERTIFICATE IN GRAPHICS AND PRINTING ARE OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 10-1/2 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$30 FOR TOOLS, \$25 FOR BOOKS AND SUPPLIES, AND A \$20 MISCELLANEOUS CHARGE.

- - - - - 25007 CANBY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GRAPHIC AND PRINTING COMMUNICATIONS, GENERAL' PROGRAM TRAINS INDIVIDUALS IN THE GENERAL APPROACHES AND TECHNIQUES USED IN THE VARIOUS GRAPHIC AND PRINTING COMMUNICATIONS SPECIALTIES. INSTRUCTION INCLUDES BOOKBINDING; COMMERCIAL ART; COMMERCIAL PHOTOGRAPHY; COMPOSITION, MAKE-UP, AND TYPESETTING; LITHOGRAPHY; PHOTOGRAPHY, PLATE MAKING; PHOTOGRAPHIC LAB AND DARKROOM; PRINTING PRESS OPERATIONS; AND SILK SCREEN MAKING AND PRINTING.

--- DEGREES OFFERED: A DIPLOMA OF GRADUATION IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 11 MONTHS LONG.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GRAPHIC AND PRINTING COMMUNICATIONS, GENERAL' PROGRAM TRAINS INDIVIDUALS IN THE GENERAL APPROACHES AND TECHNIQUES USED IN THE VARIOUS GRAPHIC AND PRINTING COMMUNICATIONS SPECIALTIES. INSTRUCTION INCLUDES BOOKBINDING; COMMERCIAL ART; COMMERCIAL PHOTOGRAPHY; COMPOSITION, MAKE-UP, AND TYPESETTING; LITHOGRAPHY; PHOTOGRAPHY, PLATE MAKING; PHOTOGRAPHIC LAB AND DARKROOM; PRINTING PRESS OPERATIONS; AND SILK SCREEN MAKING AND PRINTING.

--- DEGREES OFFERED: A CERTIFICATE AND A DEGREE OF OCCUPATIONAL PROFICIENCY ARE OFFERED.

--- LENGTH OF PROGRAM: THIS IS AN 11-22 MONTH PROGRAM.

- - - - - 25011 EVELETH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GRAPHIC AND PRINTING COMMUNICATIONS, GENERAL' PROGRAM TRAINS INDIVIDUALS IN THE GENERAL APPROACHES AND TECHNIQUES USED IN THE VARIOUS GRAPHIC AND PRINTING COMMUNICATIONS SPECIALTIES. INSTRUCTION INCLUDES BOOKBINDING; COMMERCIAL ART; COMMERCIAL PHOTOGRAPHY; COMPOSITION, MAKE-UP, AND TYPESETTING; LITHOGRAPHY; PHOTOGRAPHY, PLATE MAKING; PHOTOGRAPHIC LAB AND DARKROOM; PRINTING PRESS OPERATIONS; AND SILK SCREEN MAKING AND PRINTING.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE GRAPHIC ARTS PROGRAM IS 11-18 MONTHS LONG.

- - - - - 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GRAPHIC AND PRINTING COMMUNICATIONS, GENERAL' PROGRAM TRAINS INDIVIDUALS IN THE GENERAL APPROACHES AND TECHNIQUES USED IN THE VARIOUS GRAPHIC AND PRINTING COMMUNICATIONS

SPECIALTIES. INSTRUCTION INCLUDES BOOKBINDING; COMMERCIAL ART; COMMERCIAL PHOTOGRAPHY; COMPOSITION, MAKE-UP, AND TYPESETTING; LITHOGRAPHY; PHOTOGRAPHY, PLATE MAKING; PHOTOGRAPHIC LAB AND DARKROOM; PRINTING PRESS OPERATIONS; AND SILK SCREEN MAKING AND PRINTING.

THE 'COMMERCIAL ART' PROGRAM PREPARES INDIVIDUALS TO DESIGN AND EXECUTE LAYOUTS AND MAKE ILLUSTRATIONS FOR ADVERTISING DISPLAYS AND INSTRUCTIONAL MANUALS. INSTRUCTION INCLUDES THE PREPARATION OF COPY; LETTERING, POSTER, PACKAGE, AND PRODUCT DESIGN; FASHION ILLUSTRATION; SILK SCREENING; AIR BRUSHING; AND INKS AND COLOR DYNAMICS.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS AWARDED.

--- LENGTH OF PROGRAM: GRAPHIC COMMUNICATIONS IS A 72 WEEK PROGRAM. THE COMMERCIAL ART PROGRAM IS 84 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$175 FOR MATERIALS AND SUPPLIES FOR GRAPHIC COMMUNICATIONS AND \$282 FOR COMMERCIAL ART.

----- 25018 MINNEAPOLIS TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GRAPHIC AND PRINTING COMMUNICATIONS, GENERAL' PROGRAM TRAINS INDIVIDUALS IN THE GENERAL APPROACHES AND TECHNIQUES USED IN THE VARIOUS GRAPHIC AND PRINTING COMMUNICATIONS SPECIALTIES. INSTRUCTION INCLUDES BOOKBINDING; COMMERCIAL ART; COMMERCIAL PHOTOGRAPHY; COMPOSITION, MAKE-UP, AND TYPESETTING; LITHOGRAPHY; PHOTOGRAPHY, PLATE MAKING; PHOTOGRAPHIC LAB AND DARKROOM; PRINTING PRESS OPERATIONS; AND SILK SCREEN MAKING AND PRINTING.

THE 'COMMERCIAL ART' PROGRAM PREPARES INDIVIDUALS TO DESIGN AND EXECUTE LAYOUTS AND MAKE ILLUSTRATIONS FOR ADVERTISING DISPLAYS AND INSTRUCTIONAL MANUALS. INSTRUCTION INCLUDES THE PREPARATION OF COPY; LETTERING, POSTER, PACKAGE, AND PRODUCT DESIGN; FASHION ILLUSTRATION; SILK SCREENING; AIR BRUSHING; AND INKS AND COLOR DYNAMICS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: GRAPHICS ARTS PROGRAM IS 6-18 MONTHS LONG AND THE COMMERCIAL ART PROGRAM IS 24 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$65 FOR BOOKS, \$50 FOR TOOLS, AND \$5 FOR SAFETY GLASSES FOR GRAPHICS ARTS; AND \$40 FOR BOOKS, \$75 FOR TOOLS AND \$140 FOR SUPPLIES FOR COMMERCIAL ARTS.

----- 25019 MOORHEAD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'COMMERCIAL ART' PROGRAM PREPARES INDIVIDUALS TO DESIGN AND EXECUTE LAYOUTS AND MAKE ILLUSTRATIONS FOR ADVERTISING DISPLAYS AND INSTRUCTIONAL MANUALS. INSTRUCTION INCLUDES THE PREPARATION OF COPY; LETTERING, POSTER, PACKAGE, AND PRODUCT DESIGN; FASHION ILLUSTRATION; SILK SCREENING; AIR BRUSHING; AND INKS AND COLOR DYNAMICS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THIS IS A 20 MONTH PROGRAM.

----- 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GRAPHIC AND PRINTING COMMUNICATIONS, GENERAL' PROGRAM TRAINS INDIVIDUALS IN THE GENERAL APPROACHES AND TECHNIQUES USED IN THE VARIOUS GRAPHIC AND PRINTING COMMUNICATIONS SPECIALTIES. INSTRUCTION INCLUDES BOOKBINDING; COMMERCIAL ART; COMMERCIAL PHOTOGRAPHY; COMPOSITION, MAKE-UP, AND TYPESETTING; LITHOGRAPHY; PHOTOGRAPHY, PLATE MAKING; PHOTOGRAPHIC LAB AND DARKROOM; PRINTING PRESS OPERATIONS; AND SILK SCREEN MAKING AND PRINTING.

--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 9-23 MONTH PROGRAM.
--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$160 FOR BOOKS, SUPPLIES, AND EQUIPMENT.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GRAPHIC AND PRINTING COMMUNICATIONS, GENERAL' PROGRAM TRAINS INDIVIDUALS IN THE GENERAL APPROACHES AND TECHNIQUES USED IN THE VARIOUS GRAPHIC AND PRINTING COMMUNICATIONS SPECIALTIES. INSTRUCTION INCLUDES BOOKBINDING; COMMERCIAL ART; COMMERCIAL PHOTOGRAPHY; COMPOSITION, MAKE-UP, AND TYPESETTING; LITHOGRAPHY; PHOTOGRAPHY, PLATE MAKING; PHOTOGRAPHIC LAB AND DARKROOM; PRINTING PRESS OPERATIONS; AND SILK SCREEN MAKING AND PRINTING.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 11 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS AND SUPPLIES.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GRAPHIC AND PRINTING COMMUNICATIONS, GENERAL' PROGRAM TRAINS INDIVIDUALS IN THE GENERAL APPROACHES AND TECHNIQUES USED IN THE VARIOUS GRAPHIC AND PRINTING COMMUNICATIONS SPECIALTIES. INSTRUCTION INCLUDES BOOKBINDING; COMMERCIAL ART; COMMERCIAL PHOTOGRAPHY; COMPOSITION, MAKE-UP, AND TYPESETTING; LITHOGRAPHY; PHOTOGRAPHY, PLATE MAKING; PHOTOGRAPHIC LAB AND DARKROOM; PRINTING PRESS OPERATIONS; AND SILK SCREEN MAKING AND PRINTING.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THE GRAPHICS ARTS PROGRAM IS 14 MONTHS LONG AND STARTS QUARTERLY.

- - - - - 25026 STAPLES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GRAPHIC AND PRINTING COMMUNICATIONS, GENERAL' PROGRAM TRAINS INDIVIDUALS IN THE GENERAL APPROACHES AND TECHNIQUES USED IN THE VARIOUS GRAPHIC AND PRINTING COMMUNICATIONS SPECIALTIES. INSTRUCTION INCLUDES BOOKBINDING; COMMERCIAL ART; COMMERCIAL PHOTOGRAPHY; COMPOSITION, MAKE-UP, AND TYPESETTING; LITHOGRAPHY; PHOTOGRAPHY, PLATE MAKING; PHOTOGRAPHIC LAB AND DARKROOM; PRINTING PRESS OPERATIONS; AND SILK SCREEN MAKING AND PRINTING.

--- DEGREES OFFERED: A DIPLOMA OR A TRADE CERTIFICATE IS AWARDED.

--- LENGTH OF PROGRAM: THE GRAPHICS PREPARATION PROGRAM AND THE PHOTO OFFSET LITHOGRAPHY PROGRAM ARE COMBINED IN A 18 MONTH COURSE OF STUDY.

--- SPECIAL COSTS: BOOKS, TOOLS, AND OTHER SUPPLIES PROVIDED BY THE INSTITUTE, REQUIRE A RENTAL FEE OF \$25 PER YEAR FOR GRAPHICS ARTS.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'GRAPHIC AND PRINTING COMMUNICATIONS, GENERAL' PROGRAM TRAINS INDIVIDUALS IN THE GENERAL APPROACHES AND TECHNIQUES USED IN THE VARIOUS GRAPHIC AND PRINTING COMMUNICATIONS SPECIALTIES. INSTRUCTION INCLUDES BOOKBINDING; COMMERCIAL ART; COMMERCIAL PHOTOGRAPHY; COMPOSITION, MAKE-UP, AND TYPESETTING; LITHOGRAPHY; PHOTOGRAPHY, PLATE MAKING; PHOTOGRAPHIC LAB AND DARKROOM; PRINTING PRESS OPERATIONS; AND SILK SCREEN MAKING AND PRINTING.

THE 'COMMERCIAL ART' PROGRAM PREPARES INDIVIDUALS TO DESIGN AND EXECUTE LAYOUTS AND MAKE ILLUSTRATIONS FOR ADVERTISING DISPLAYS AND INSTRUCTIONAL MANUALS. INSTRUCTION INCLUDES THE PREPARATION OF COPY; LETTERING, POSTER, PACKAGE, AND PRODUCT DESIGN; FASHION ILLUSTRATION; SILK SCREENING; AIR BRUSHING; AND INKS AND COLOR DYNAMICS.

--- DEGREES OFFERED: DIPLOMAS OF RECOGNITION ARE OFFERED IN EACH OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THE GRAPHIC AND PRINTING COMMUNICATIONS PROGRAM IS FROM 6 TO 15 MONTHS LONG. THE COMMERCIAL ART PROGRAM IS 12 TO 24 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR BOOKS AND SUPPLIES ARE \$100 FOR GRAPHICS AND \$240 FOR COMMERCIAL ART OCCUPATIONS.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'TECHNICAL ILLUSTRATION' PROGRAM PREPARES INDIVIDUALS TO DESIGN AND EXECUTE LAYOUTS AND MAKE ILLUSTRATIONS FOR INSTRUCTIONAL MANUALS. INSTRUCTION INCLUDES PREPARATION OF COPY; LETTERING, POSTER, PACKAGE, AND PRODUCE DESIGN; TECHNICAL ILLUSTRATION; SILK SCREENING; AIR BRUSHING; AND INKS AND COLOR DYNAMICS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OR A CERTIFICATE IS AWARDED.

--- LENGTH OF PROGRAM: THE PROGRAM LASTS 9 MONTHS.

--- SPECIAL COSTS: COSTS WILL INCLUDE ABOUT \$175 FOR BOOKS (ALL USABLE BOOKS ARE BOUGHT BACK AT 70 PERCENT OF PAID PRICE) AND \$110 FOR TOOLS.

- - - - - 26070 BEMIDJI STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE BACHELOR OF SCIENCE MAJOR PROGRAM IN 'PRINTING AND GRAPHICS' IS DESIGNED AS A COMPREHENSIVE EDUCATION IN THE MANY ASPECTS OF TECHNICAL ILLUSTRATION AND COMMERCIAL DESIGN RATHER THAN A NARROW SPECIALIZATION. THE PROGRAM DRAWS UPON RESOURCES OF THE DEPARTMENTS OF ART, INDUSTRIAL EDUCATION AND COMMERCIAL MEDIA. STUDENTS COMPLETE A 42 QUARTER CREDIT CORE AND 12 CREDITS IN EACH OF 3 FIELDS: GRAPHICS TECHNOLOGY, STUDIO ART, AND COMMERCIAL ART.

--- DEGREES OFFERED: AN ASSOCIATE OF SCIENCE AND A BACHELOR OF SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS ONE TO FOUR YEARS LONG.

- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: MINNEAPOLIS COMMUNITY COLLEGE AND MINNEAPOLIS TECHNICAL INSTITUTE OFFER A COOPERATIVE PROGRAM IN 'COMMERCIAL ART'. STUDENTS ARE TRAINED IN THE AREA OF ADVERTISING DESIGN IN ADDITION TO RECEIVING A BACKGROUND FROM WHICH THEY MAY CONTINUE TRAINING FOR OTHER SPECIALIZATIONS. STUDENTS COMPLETE COURSES IN COMMERCIAL ART AND RELATED SUBJECTS AT M.T.I. AND GENERAL EDUCATION COURSES AT MINNEAPOLIS C.C.

--- DEGREES OFFERED: GRADUATES RECEIVE A COMMERCIAL ART CERTIFICATE FROM M.T.I. AND AN ASSOCIATE IN APPLIED SCIENCE DEGREE FROM MINNEAPOLIS C.C.

--- LENGTH OF PROGRAM: THE PROGRAM IS TWO YEARS LONG.

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'GRAPHIC DESIGN' PROGRAM PROVIDES STUDENTS WITH A BACKGROUND IN GRAPHIC DESIGN AS WELL AS THE STUDIO ARTS. BY GRADUATION STUDENTS WILL HAVE COMPLETED A PORTFOLIO OF WORK AND WILL HAVE BEEN TRAINED AS TECHNICALLY AND CREATIVELY ORIENTED DESIGNERS.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: COMMERCIAL ART/GRAPHIC DESIGN IS A 2 YEAR PROGRAM.

- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'COMMUNICATIONS TECHNOLOGY/GRAPHICS' PROGRAM IS DESIGNED TO PROVIDE STUDENTS WITH THE BASIC SKILLS NECESSARY TO ENTER THE PRINTING INDUSTRY. STUDENTS COMPLETE COURSES IN MANAGEMENT,

PRODUCTION PLANNING, ESTIMATING, AND THE FUNDAMENTALS OF DESIGN, PHOTOGRAPHY, TYPOGRAPHY, COMPOSITION, AND LITHOGRAPHY AS WELL AS THE REQUIRED GENERAL EDUCATION COURSES. THIS PROGRAM IS BEING STUDIED AS A POSSIBLE JOINT PROGRAM WITH 916 AVTI. IF IMPLEMENTED, THE OBJECTIVES WILL CHANGE WITH GREATER EMPHASIS ON MANAGEMENT SKILLS AND LESS ON TECHNICAL SKILLS.

--- DEGREES OFFERED: STUDENTS MAY EARN AN ASSOCIATE IN SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THIS IS A 96 QUARTER CREDIT PROGRAM.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'FILMMAKING' PROGRAM PROVIDES STUDENTS WHO ARE INTERESTED IN FILM AS A MEDIUM OF SELF-EXPRESSION, WITH THE AESTHETIC, TECHNICAL, AND HISTORICAL BACKGROUND NECESSARY TO HELP THEM UNDERSTAND AND USE THE MEDIUM. IT ALSO PROVIDES THEM WITH THE ENTRY-LEVEL SKILLS NEEDED TO FIND EMPLOYMENT IN EDUCATIONAL OR COMMERCIAL FILM FIELDS. MANY OF THE COURSES ALSO PROVIDE CONTINUING EDUCATION OPPORTUNITIES FOR THOSE CURRENTLY EMPLOYED IN THE FIELD.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 82009 DUNWOODY INDUSTRIAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PRINTING' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR A VARIETY OF CAREERS IN THE PRINTING/ GRAPHIC INDUSTRY. STUDENTS SPEND 3 HOURS EACH DAY IN THE PRINT SHOP DEVELOPING SKILLS AND A PRACTICAL UNDERSTANDING OF PRINTING. STUDENTS ALSO TAKE 3 CLASS PERIODS OF RELATED TECHNICAL INSTRUCTION WHICH INCLUDES JOB INFORMATION ABOUT PROCESSES, MATERIALS, PROCEDURES, MACHINES, ESTIMATING, PRINCIPLES OF LAYOUT AND DESIGN, AND OTHER PRINTING COURSES.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM CONSISTS OF 18 TRAINING PERIODS, EACH 4 WEEKS LONG, FOR A TOTAL OF 72 WEEKS.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 84014 NORTHWESTERN COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'COMMERCIAL ART' AND 'ART' PROGRAMS ARE DESIGNED TO GIVE STUDENTS A FOUNDATION OF KNOWLEDGE AND SKILLS NECESSARY FOR A CAREER IN THE FIELD. STUDENTS ARE REQUIRED TO TAKE A ONE YEAR COURSE IN THE BIBLE. THIS INCLUDES HISTORY AND LITERATURE OF THE BIBLE AND DOCTRINE.

--- DEGREES OFFERED: AN ASSOCIATE IN ARTS, VOCATIONAL STUDIES, BIBLE, BACHELOR OF ARTS, OR BACHELOR OF SCIENCE DEGREE IS OFFERED.

318 PRINTING AND GRAPHICS TRANSFER PROGRAMS:

- - - - - 27139 AUSTIN COMMUNITY COLLEGE
- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27144 ITASCA COMMUNITY COLLEGE
- - - - - 27145 WILLMAR COMMUNITY COLLEGE
- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE
- - - - - 27147 VERMILION COMMUNITY COLLEGE
- - - - - 27148 ROCHESTER COMMUNITY COLLEGE
- - - - - 27149 NORTHLAND COMMUNITY COLLEGE
- - - - - 27150 MESABI COMMUNITY COLLEGE

- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE
- - - - - 27156 NORMANDALE COMMUNITY COLLEGE
- - - - - 83002 CROSIER SEMINARY JUNIOR COLLEGE
- - - - - 84013 NORTH CENTRAL BIBLE COLLEGE
- - - - - 84015 PILLSBURY COLLEGE
- - - - - 84021 ST. PAUL BIBLE COLLEGE

319 MODELING

Programs in modeling are designed to prepare individuals for careers in television commercials, magazine advertising, and retail or showroom modeling. Students learn the techniques of grooming; wardrobe; television, fashion, and illustration modeling; and other specialties. Many private schools provide training in modeling with program length varying from several weeks to one year.

---PROGRAM ADMISSION: Most schools require a personal interview. See school brochures for more information.

---TYPICAL COURSE WORK: Course work includes some lectures but most involves practical application and experience in the following areas:

Professional Poise	Television Commercials
Professional Makeup	Formal Fashion Shows
Photo Posing Techniques	Trade Shows and Conventions

---GRADUATION REQUIREMENTS: Requirements vary. See school brochures for details.

---THINGS TO KNOW: Most schools with modeling programs will also accept individuals who are interested in developing poise and confidence rather than in preparing for a modeling career.

---RELATED PROGRAMS: PROG 317 Photographic Arts, 228 Hair Design, 391 Home Economics, 395 Textiles and Clothing, 316 Dramatic Arts.

---DIRECTLY RELATED OCCUPATION: DESC 9842 Models.

ASSOCIATED OCCUPATIONS: DESC 8662 Flight Attendants, 9863 Actors and Actresses.

CIPS: 37.

SCHOOLS:

- - - - - 82082 JOHN ROBERT POWERS MODELING AND CAREER SCHOOL

--- OBJECTIVES OF THE PROGRAM: THE 'PROFESSIONAL MODELING COURSE' IS DESIGNED TO PREPARE STUDENTS TO ENTER CAREERS IN FASHION SHOW COORDINATING AND COMMENTATING, MODELING, OR CHARM INSTRUCTING. IT IS ALSO DESIGNED AS A PERSONAL DEVELOPMENT COURSE. STUDENTS STUDY AND PRACTICE SKILLS SUCH AS MODELING, APPLYING MAKEUP AND STYLING HAIR, SPEECH, FIGURE FITNESS, AND CAMERA POSING. THEY ALSO LEARN ABOUT PRESENTING FASHION SHOWS AND SEEKING PROFESSIONAL MODELING ASSIGNMENTS. UPON COMPLETION OF ENTIRE PROGRAM, GRADUATES ARE QUALIFIED TO ENTER THE JOB MARKET AS PROFESSIONAL MODELS.

--- DEGREES OFFERED: GRADUATES OF THIS PROGRAM RECEIVE DIPLOMAS.

--- LENGTH OF PROGRAM: THE PROGRAM IS DIVIDED INTO TWO SEMESTERS. THE FIRST SEMESTER LASTS EIGHT WEEKS AND THE SECOND SEMESTER LASTS TWELVE WEEKS FOR A TOTAL OF 51 HOURS.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

Nursing programs are designed to teach people how to provide care for others who are sick, injured, or disabled. This includes giving treatments and medications and planning, implementing, and evaluating nursing care.

Many schools offer programs that intend to prepare people to be nurse's aides, practical nurses, and registered nurses. Programs vary in length and emphasis from a one term course in nurse's aide/orderly, to a master's degree program in nursing. Nurse's aide programs are offered at many community colleges with training intending to prepare people to assist registered nurses. Practical nursing programs are one-year certificate programs, offered at most community colleges. They intend to prepare people to care for patients by administering medication, monitoring equipment, changing dressings, and assisting patients with personal hygiene.

Registered nursing programs are two, three, or four years in length. Associate degree, diploma, and bachelor's degree programs intend to prepare people to promote health care and provide patient care. Bachelor's degree programs also intend to prepare people for leadership positions in hospitals, clinics, and schools. Master's degree programs in nursing intend to prepare clinical specialists, nurse clinicians, teachers, and administrators for hospitals, clinics, community agencies, and schools of nursing.

Most four-year and community colleges offer the first year or two of bachelor's degree requirements which may be transferred to a school offering a bachelor's degree in nursing.

Practical nurses and registered nurses must be licensed by the state board of nursing. For details see PREP 8162 Registered Nurses or PREP 8164 Licensed Practical Nurses.

---PROGRAM ADMISSION: Most nursing programs are limited in enrollment, with competition for available slots. Students often must make separate applications for admission to the college and to the school of nursing. An interview, an aptitude test, and an excellent academic background may be required for admission to nursing programs.

---TYPICAL COURSE WORK: Most longer programs include all or most of the following:

Human Development	General Psychology
Pharmacology	Nursing Science
Basic Nutrition	Human Anatomy and Physiology
Chemistry	Microbiology

Course related experience in hospitals is an integral part of all programs. The longer bachelor's degree programs also include more emphasis on general education requirements such as English composition and speech. See school catalogs for a complete description of course work.

---GRADUATION REQUIREMENTS: Requirements vary with the school, type of program, and program length. See college catalogs for details.

---RELATED PROGRAMS: PROG 363 Medicine, 387 Other Health Technologies, 381 Emergency Medical Care, 383 Medical Laboratory Technologies, 366 Medical Assisting.

---DIRECTLY RELATED OCCUPATIONS: DESC 8162 Registered Nurses, 8164 Licensed Practical Nurses, 8166 Nurse Aides, 8187 Nurse-Midwives, 8198

Nurse Practitioners.

ASSOCIATED OCCUPATIONS: DESC 8117 Physician Assistants, 1134 Health Service Administrators, 8188 Health Technicians, 8195 Medical Assistants, 8112 Physicians.

---REFERENCES: Publications of the National League for Nursing (NLN) describe all types of nursing programs. For a free brochure listing NLN publications, write:

National League for Nursing
10 Columbus Circle
New York, NY 10019

For licensing information write:

Board of Nursing
717 Delaware Street, S.E.
Minneapolis, MN 55414

CIPS: 17.0513
17.06
18.11 (except 18.1107)

SCHOOLS:

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.

--- DEGREES OFFERED: A DIPLOMA IN PRACTICAL NURSING PREPARING THE STUDENT TO TAKE THE STATE BOARD EXAMINATION FOR LICENSURE AND TO EARN THE LICENSED PRACTICAL NURSE(L.P.N.) TITLE IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 10 1/2 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$200 FOR BOOKS AND UNIFORMS AND \$40 FOR THE STATE P.N. LICENSING EXAM.

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'NURSE ASSISTANT' (30 HOUR COURSE) PROGRAM PREPARES INDIVIDUALS TO PERFORM ROUTINE TASKS UNDER THE SUPERVISION OF A REGISTERED OR LICENSED PRACTICAL NURSE. INSTRUCTION INCLUDES PROVIDING OF PERSONAL CARE TO INDIVIDUALS WHO RECEIVE NURSING CARE IN LONG TERM CARE FACILITIES. THIS THIRTY HOUR COURSE MEETS MINIMUM STATE REQUIREMENTS. THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE NURSE ASSISTANT PROGRAM IS ONE MONTH LONG WHILE THE PRACTICAL NURSING PROGRAM IS TEN MONTHS DAYS AND 22 MONTHS EVENINGS (PART TIME).

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR NURSING ASSISTANT INCLUDE \$12 FOR BOOKS AND A LAB FEE. FOR PRACTICAL NURSING, PROGRAM RELATED COSTS WILL INCLUDE \$350 FOR BOOKS AND SUPPLIES.

- - - - - 25004 AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY AND A CERTIFICATE IN PRACTICAL NURSING ARE OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 10 1/2 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$180 FOR BOOKS AND SUPPLIES, \$105 FOR UNIFORMS, AND A \$250 MISCELLANEOUS CHARGE.

- - - - - 25005 BEMIDJI AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.

--- DEGREES OFFERED: A DIPLOMA IN PRACTICAL NURSING IS OFFERED.

--- LENGTH OF PROGRAM: THE PRACTICAL NURSING PROGRAM IS 10 MONTHS LONG.

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.

--- DEGREES OFFERED: A DIPLOMA OF COMPLETION AND A CERTIFICATE OF ATTENDANCE IN PRACTICAL NURSING ARE OFFERED.

--- LENGTH OF PROGRAM: THE PRACTICAL NURSING PROGRAM IS 11 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$200 FOR BOOKS AND SUPPLIES. UNIFORMS COST \$60.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED IN THE PRACTICAL NURSING PROGRAM.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 10 1/2 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR PRACTICAL NURSING ARE \$400. THIS IS FOR BOOKS, SUPPLIES, UNIFORMS, AND LIABILITY INSURANCE.

- - - - - 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.

--- DEGREES OFFERED: A VOCATIONAL DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 10 1/2 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$155 FOR BOOKS, \$139 FOR SUPPLIES AND \$115 FOR UNIFORMS.

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.

THE 'NURSE ASSISTANT' (30 HOUR COURSE) PROGRAM PREPARES INDIVIDUALS TO PERFORM ROUTINE TASKS UNDER THE SUPERVISION OF A REGISTERED OR LICENSED PRACTICAL NURSE. INSTRUCTION INCLUDES PROVIDING OF PERSONAL CARE TO INDIVIDUALS WHO RECEIVE NURSING CARE IN LONG TERM CARE FACILITIES. THIS THIRTY HOUR COURSE MEETS MINIMUM STATE REQUIREMENTS.

--- DEGREES OFFERED: THE PRACTICAL NURSING PROGRAM OFFERS A CERTIFICATE OR A DEGREE OF OCCUPATIONAL PROFICIENCY WHILE THE NURSING ASSISTANT PROGRAM OFFERS A CERTIFICATE.

--- LENGTH OF PROGRAM: THE PRACTICAL NURSING PROGRAM IS 10 1/2 MONTHS LONG

WHILE THE NURSING ASSISTANT PROGRAM IS A 30 HOUR COURSE.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$385 FOR THE PRACTICAL NURSING PROGRAM AND \$40 FOR THE NURSING ASSISTANT PROGRAM.

- - - - - 25011 EVELETH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST. THE 'NURSE ASSISTANT' (30 HOUR COURSE) PROGRAM PREPARES INDIVIDUALS TO PERFORM ROUTINE TASKS UNDER THE SUPERVISION OF A REGISTERED OR LICENSED PRACTICAL NURSE. INSTRUCTION INCLUDES PROVIDING OF PERSONAL CARE TO INDIVIDUALS WHO RECEIVE NURSING CARE IN LONG TERM CARE FACILITIES. THIS THIRTY HOUR COURSE MEETS MINIMUM STATE REQUIREMENTS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE PRACTICAL NURSING PROGRAM IS TEN MONTHS LONG. THE 30 HOUR 'NURSING ASSISTANT' PROGRAM IS ALSO OFFERED.

- - - - - 25012 FARIBAULT AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE PRACTICAL NURSING PROGRAM IS 10 MONTHS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$435 FOR BOOKS AND SUPPLIES.

- - - - - 25014 HIBBING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'NURSE ASSISTANT' (30 HOUR COURSE) PROGRAM PREPARES INDIVIDUALS TO PERFORM ROUTINE TASKS UNDER THE SUPERVISION OF A REGISTERED OR LICENSED PRACTICAL NURSE. INSTRUCTION INCLUDES PROVIDING OF PERSONAL CARE TO INDIVIDUALS WHO RECEIVE NURSING CARE IN LONG TERM CARE FACILITIES. THIS THIRTY HOUR COURSE MEETS MINIMUM STATE REQUIREMENTS.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS OFFERED.

--- LENGTH OF PROGRAM: THE NURSING ASSISTANT PROGRAM IS 3-4 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS, SUPPLIES, EQUIPMENT AND OTHER COSTS.

- - - - - 25016 JACKSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'NURSE ASSISTANT' (30 HOUR COURSE) PROGRAM PREPARES INDIVIDUALS TO PERFORM ROUTINE TASKS UNDER THE SUPERVISION OF A REGISTERED OR LICENSED PRACTICAL NURSE. INSTRUCTION INCLUDES PROVIDING OF PERSONAL CARE TO INDIVIDUALS WHO RECEIVE NURSING CARE IN LONG TERM CARE FACILITIES. THIS THIRTY HOUR COURSE MEETS MINIMUM STATE REQUIREMENTS.

--- DEGREES OFFERED: THOSE WHO SUCCESSFULLY COMPLETE THIS PROGRAM RECEIVE A TECHNICAL SCHOOL DIPLOMA.

--- LENGTH OF PROGRAM: THE NURSE AIDE PROGRAM IS 4 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$80 FOR SUPPLIES AND \$90 FOR TUITION.

- - - - - 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST. THE 'NURSE ASSISTANT' (30 HOUR COURSE) PROGRAM PREPARES INDIVIDUALS TO PERFORM ROUTINE TASKS UNDER THE SUPERVISION OF A REGISTERED OR LICENSED PRACTICAL NURSE. INSTRUCTION INCLUDES PROVIDING OF PERSONAL CARE TO INDIVIDUALS WHO RECEIVE NURSING CARE

IN LONG TERM CARE FACILITIES. THIS THIRTY HOUR COURSE MEETS MINIMUM STATE REQUIREMENTS.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS AWARDED TO STUDENTS WHO SUCCESSFULLY COMPLETE THE PROGRAM.

--- LENGTH OF PROGRAM: PRACTICAL NURSING IS A 42 WEEK PROGRAM. THE NURSE ASSISTANT PROGRAM IS A 30 HOUR COURSE.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$280 FOR THE PRACTICAL NURSING PROGRAM FOR UNIFORMS AND SUPPLIES AND BOOKS.

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED TO STUDENTS WHO COMPLETE THE PROGRAM.

--- LENGTH OF PROGRAM: LICENSED PRACTICAL NURSING IS 4 QUARTERS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$180 FOR BOOKS AND \$230 FOR UNIFORMS AND/OR SUPPLIES.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'NURSE ASSISTANT' (30 HOUR COURSE) PROGRAM PREPARES INDIVIDUALS TO PERFORM ROUTINE TASKS UNDER THE SUPERVISION OF A REGISTERED OR LICENSED PRACTICAL NURSE. INSTRUCTION INCLUDES PROVIDING OF PERSONAL CARE TO INDIVIDUALS WHO RECEIVE NURSING CARE IN LONG TERM CARE FACILITIES. THIS THIRTY HOUR COURSE MEETS MINIMUM STATE REQUIREMENTS.

--- DEGREES OFFERED: NURSING ASSISTANT GRADUATES RECEIVE A CERTIFICATE.

--- LENGTH OF PROGRAM: THE NURSING ASSISTANT BASIC PROGRAM IS ABOUT 4 WEEKS LONG. THE HOSPITAL PROGRAM REQUIRES ANOTHER 2 WEEKS.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$120 FOR BOOKS, SUPPLIES AND EQUIPMENT.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'NURSE ASSISTANT' (30 HOUR COURSE) PROGRAM PREPARES INDIVIDUALS TO PERFORM ROUTINE TASKS UNDER THE SUPERVISION OF A REGISTERED OR LICENSED PRACTICAL NURSE. INSTRUCTION INCLUDES PROVIDING OF PERSONAL CARE TO INDIVIDUALS WHO RECEIVE NURSING CARE IN LONG TERM CARE FACILITIES. THIS THIRTY HOUR COURSE MEETS MINIMUM STATE REQUIREMENTS.

THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED TO STUDENTS WHO SUCCESSFULLY COMPLETE THE PRACTICAL NURSE PROGRAM. GRADUATES OF THE NURSE ASSISTANT PROGRAM RECEIVE A CERTIFICATE.

--- LENGTH OF PROGRAM: THE PRACTICAL NURSE PROGRAM TAKES 10 MONTHS TO COMPLETE. THE NURSE ASSISTANT PROGRAM IS 4 - 6 WEEKS LONG.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.

--- LENGTH OF PROGRAM: THE PRACTICAL NURSING PROGRAM IS 10 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$325 FOR BOOKS AND SUPPLIES.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.
--- DEGREES OFFERED: A DIPLOMA IS AWARDED FOR COMPLETION OF THE PRACTICAL NURSING PROGRAM.
--- LENGTH OF PROGRAM: THIS PROGRAM REQUIRES 10-1/2 MONTHS TO COMPLETE.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS
--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.
--- DEGREES OFFERED: A DIPLOMA OF RECOGNITION IS OFFERED.
--- LENGTH OF PROGRAM: THIS PROGRAM IS ELEVEN MONTHS LONG.
--- SPECIAL COSTS: COSTS INCLUDE \$145 FOR BOOKS AND SUPPLIES.

- - - - - 25028 THIEF RIVER FALLS AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.
--- DEGREES OFFERED: DEGREES OF OCCUPATIONAL PROFICIENCY ARE AWARDED.
--- LENGTH OF PROGRAM: THE PROGRAM TAKES 11 MONTHS.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.
--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OR A CERTIFICATE IS AWARDED.
--- LENGTH OF PROGRAM: THE NURSING PROGRAM LASTS 11 MONTHS.
--- SPECIAL COSTS: COSTS WILL INCLUDE ABOUT \$180 FOR BOOKS (ALL USABLE BOOKS ARE BOUGHT BACK AT 70 PERCENT OF PAID PRICE) AND \$75 FOR UNIFORMS.

- - - - - 25031 WINONA AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'NURSE ASSISTANT' (30 HOUR COURSE) PROGRAM PREPARES INDIVIDUALS TO PERFORM ROUTINE TASKS UNDER THE SUPERVISION OF A REGISTERED OR LICENSED PRACTICAL NURSE. INSTRUCTION INCLUDES PROVIDING OF PERSONAL CARE TO INDIVIDUALS WHO RECEIVE NURSING CARE IN LONG TERM CARE FACILITIES. THIS THIRTY HOUR COURSE MEETS MINIMUM STATE REQUIREMENTS. THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.
--- DEGREES OFFERED: NURSE ASSISTANT GRADUATES RECEIVE A CERTIFICATE. PRACTICAL NURSING GRADUATES RECEIVE A VOCATIONAL DIPLOMA.
--- LENGTH OF PROGRAM: LICENSED PRACTICAL NURSING IS A 10 MONTH PROGRAM. THE NURSE ASSISTANT PROGRAM TAKES 30 - 120 HOURS TO COMPLETE.
--- SPECIAL COSTS: THE LPN PROGRAM COSTS WILL INCLUDE ABOUT \$350 FOR BOOKS AND SUPPLIES AND \$75 FOR UNIFORMS. THE NURSE ASSISTANT PROGRAM COSTS INCLUDE \$110 FOR BOOKS, SUPPLIES AND TUITION FOR THE 120 HOUR PROGRAM AND ABOUT \$90 FOR THE 30 HOUR PROGRAM.

- - - - - 25032 EAST GRAND FORKS AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'NURSE ASSISTANT' (30 HOUR COURSE) PROGRAM PREPARES INDIVIDUALS TO PERFORM ROUTINE TASKS UNDER THE SUPERVISION OF A REGISTERED OR LICENSED PRACTICAL NURSE. INSTRUCTION INCLUDES PROVIDING

OF PERSONAL CARE TO INDIVIDUALS WHO RECEIVE NURSING CARE IN LONG TERM CARE FACILITIES. THIS THIRTY HOUR COURSE MEETS MINIMUM STATE REQUIREMENTS. THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.

--- DEGREES OFFERED: A CERTIFICATE OF COMPETENCY IS OFFERED IN THE NURSE ASSISTANT PROGRAM. THE PRACTICAL NURSING PROGRAM OFFERS A DEGREE OF OCCUPATIONAL PROFICIENCY.

--- LENGTH OF PROGRAM: THE NURSE ASSISTANT PROGRAM IS FIVE WEEKS LONG. THE PRACTICAL NURSING PROGRAM IS 9 MONTHS LONG.

- - - - - 25033 RED WING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PROVIDING GENERAL NURSING CARE UNDER THE DIRECTION OF A REGISTERED NURSE, PHYSICIAN OR DENTIST.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: THE PRACTICAL NURSING PROGRAM IS 10 MONTHS LONG.

- - - - - 27139 AUSTIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'NURSING' PROGRAM PREPARES STUDENTS TO GIVE DIRECT PATIENT CARE AS REGISTERED NURSES. GRADUATES ARE ELIGIBLE TO TAKE STATE BOARD OF NURSING EXAMINATION FOR LICENSURE. THE PROGRAM INCLUDES BOTH NURSING AND GENERAL COLLEGE COURSES. THE NURSING PORTION INCLUDES BOTH CLASSROOM AND CLINICAL EXPERIENCE IN AREA HEALTH AGENCIES.

--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE DEGREE IS AWARDED TO GRADUATES.

--- LENGTH OF PROGRAM: NURSING IS A 2 YEAR PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE UNIFORMS AND SHOES, AND COST ABOUT \$250.

- - - - - 27140 BRAINERD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE ASSOCIATE IN SCIENCE DEGREE IN 'NURSING' PROGRAM IS OFFERED TO LICENSED PRACTICAL NURSES WHO ARE GRADUATES OF ACCREDITED L.P.N. PROGRAMS AND WHO HAVE TAKEN THE L.P.N. STATE BOARDS. THE PROGRAM IS DESIGNED TO OFFER THEM GENERAL EDUCATION AND NURSING COURSES IN PREPARATION FOR TAKING THE STATE REGISTERED NURSE EXAM. STUDENTS COMPLETE 3 NURSING COURSES AND COURSES IN THE NATURAL, SOCIAL, AND BEHAVIORAL SCIENCES, THE HUMANITIES, AND MATH.

--- DEGREES OFFERED: GRADUATES RECEIVE AN ASSOCIATE IN SCIENCE DEGREE IN NURSING AND MAY TAKE THE STATE R.N. EXAM.

--- LENGTH OF PROGRAM: THE PROGRAM REQUIRES 2 5-WEEK SUMMER SESSIONS AND 3 QUARTERS OF STUDY.

- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM IS DESIGNED TO OFFER A SOUND BASIC EXPERIENCE IN NURSING TO ENABLE STUDENTS TO EXECUTE THEIR ROLE EFFECTIVELY IN NURSING THE PATIENT. THE PRACTICAL NURSE WORKS UNDER THE IMMEDIATE DIRECTION AND GENERAL SUPERVISION OF A QUALIFIED PROFESSIONAL NURSE AND/OR PHYSICIAN AND ASSISTS THE PROFESSIONAL NURSE IN MORE COMPLEX SITUATIONS.

--- DEGREES OFFERED: A VOCATIONAL CERTIFICATE IS OFFERED, AND GRADUATES ARE ELIGIBLE TO WRITE THE MINNESOTA STATE BOARD OF NURSING EXAMINATION TO BECOME A LICENSED PRACTICAL NURSE.

--- LENGTH OF PROGRAM: THE PRACTICAL NURSING PROGRAM IS 3 QUARTERS PLUS A 3-WEEK SUMMER SESSION.

- - - - - 27143 HIBBING COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'NURSING' ASSOCIATE DEGREE PROGRAM PREPARES THE STUDENTS TO WRITE THE MINNESOTA BOARD OF NURSING EXAMINATION FOR REGISTERED NURSES. GRADUATES WILL BE PREPARED FOR BEGINNING POSITIONS IN HOSPITALS AND CLINICS. COMMUNITY AND AREA HOSPITALS, CLINICS AND OTHER HEALTH AGENCIES ARE USED FOR LABORATORY EXPERIENCES.

--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE NURSING PROGRAM IS 2 YEARS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$150 FOR UNIFORMS, SUPPLIES, AND EQUIPMENT.

- - - - - 27144 ITASCA COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'NURSE/GERIATRIC AIDE' PROGRAM PREPARES STUDENTS TO WORK AS HEALTH AIDES. IT TRAINS THEM TO MEET THE NEEDS OF PATIENTS AND PREPARES THEM TO TAKE THE LICENSING EXAMINATION REQUIRED BY THE MINNESOTA BOARD OF NURSING. NURSING AIDE STUDENTS TAKE TWO COURSES IN NURSING AID FUNDAMENTALS WHILE PRACTICAL NURSING STUDENTS TAKE SPECIAL COURSES AND LABS IN NURSING.

--- DEGREES OFFERED: PROGRAM GRADUATES MAY RECEIVE VOCATIONAL CERTIFICATES.

--- LENGTH OF PROGRAM: THE NURSING/GERIATRIC AIDE PROGRAM IS 6 WEEKS LONG. THE PRACTICAL NURSING PROGRAM IS 40 WEEKS LONG.

- - - - - 27145 WILLMAR COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'REGISTERED NURSING' PROGRAM PROVIDES CLASSROOM AND CLINICAL INSTRUCTION FOR LICENSED PRACTICAL NURSES, QUALIFYING THEM TO TAKE THE MINNESOTA STATE LICENSURE EXAM TO BECOME REGISTERED NURSES. THIS PROGRAM IS BASED UPON THE 'CAREER MOBILITY' CONCEPT. GRADUATES ARE PREPARED TO ADMINISTER COMPETENT, DIRECT, PATIENT-CENTERED CARE TO MEET THE NEEDS OF INDIVIDUALS/FAMILIES IN NURSING HOMES, HOSPITALS, CLINICS, AND OTHER HEALTH CARE FACILITIES.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE REGISTERED NURSING PROGRAM IS ONE YEAR LONG. STUDENTS ARE ADMITTED ONCE A YEAR, BEGINNING WITH SUMMER SESSION I.

- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM TRAINS STUDENTS TO WORK UNDER THE SUPERVISION OF REGISTERED NURSES IN HOSPITALS AND NURSING HOMES. STUDENTS WHO COMPLETE THIS PROGRAM ARE ELIGIBLE TO TAKE THE STATE BOARD EXAMINATION FOR LICENSURE AS A PRACTICAL NURSE.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS OFFERED.

--- LENGTH OF PROGRAM: THE PRACTICAL NURSING PROGRAM IS 10 MONTHS LONG.

- - - - - 27148 ROCHESTER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE ASSOCIATE DEGREE 'NURSING' PROGRAM PREPARES STUDENTS TO GIVE PATIENT-CENTERED CARE, UNDER THE SUPERVISION OF PROFESSIONAL NURSES AND PHYSICIANS. THE FOLLOW-ING INSTITUTIONS ARE USED FOR CLINICAL EXPERIENCES: ROCHESTER METHODIST HOSPITAL, AND SAINT MARY'S HOSPITAL. GRADUATES ARE ELIGIBLE FOR THE REGISTERED NURSE (R.N.) LICENSURE EXAMINATION.

--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS TWO ACADEMIC YEARS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE UNIFORMS.

- - - - - 27149 NORTHLAND COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'NURSING' PROGRAM IS DESIGNED TO

PREPARE LICENSED PRACTICAL NURSES TO BECOME REGISTERED NURSES. GRADUATES ARE QUALIFIED TO TAKE THE MINNESOTA STATE BOARD TEST POOL LICENSURE EXAMINATION. REQUIRED COURSES INCLUDE INTEGRATED SCIENCE, NURSING, PSYCHOLOGY, ANTHROPOLOGY, ENGLISH, SPEECH, AND SOCIOLOGY. ENROLLMENT IN THE PROGRAM IS LIMITED.

--- DEGREES OFFERED: GRADUATES RECEIVE AN ASSOCIATE DEGREE IN NURSING.

--- LENGTH OF PROGRAM: THIS IS A 1 YEAR PROGRAM.

- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE ASSOCIATE DEGREE PROGRAM IN 'NURSING' PREPARES STUDENTS TO QUALIFY TO TAKE THE STATE BOARD OF NURSING EXAMINATION FOR LICENSURE AS A REGISTERED NURSE. THE CURRICULUM PROVIDES BOTH NURSING COURSES AND GENERAL EDUCATION.

--- DEGREES OFFERED: GRADUATES RECEIVE AN ASSOCIATE OF SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THIS IS A TWO YEAR PROGRAM.

- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: STUDENTS WHO SUCCESSFULLY COMPLETE THE 'NURSING' PROGRAM ARE ELIGIBLE TO WRITE THE EXAM FOR LICENSURE AS REGISTERED NURSES. THE REGISTERED ASSOCIATE DEGREE NURSE DOES BASIC NURSING AND ACCEPTS SUPERVISION FROM A MORE EXPERIENCED, SKILLED NURSE PRACTITIONER OR PHYSICIAN, WHILE SUPERVISING THOSE WITH LESS EDUCATION AND/OR EXPERIENCE. REQUIRED COURSES INCLUDE ANATOMY, PHYSIOLOGY, MATH, SPEECH, ENGLISH, SOCIOLOGY, PSYCHOLOGY, AND MICROBIOLOGY AS WELL AS NURSING COURSES AND HUMANITIES AND SOCIAL SCIENCE ELECTIVES. AN OPTION FOR CURRENTLY LICENSED PRACTICAL NURSES IS AVAILABLE.

--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: NURSING IS A 2 YEAR PROGRAM.

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE ASSOCIATE DEGREE 'NURSING' PROGRAM PREPARES STUDENTS TO TAKE THE REGISTERED NURSE LICENSING EXAMINATION IN MINNESOTA UPON GRADUATION. COURSES ARE REQUIRED IN AGING AND DEATH, ANATOMY AND PHYSIOLOGY, MICROBIOLOGY, SOCIOLOGY, COMMUNICATIONS, CHILD DEVELOPMENT, ENGLISH, PHYSICS, HUMANITIES, AND SOCIAL SCIENCE AS WELL AS SPECIALIZED NURSING COURSES.

--- DEGREES OFFERED: GRADUATES RECEIVE AN ASSOCIATE DEGREE IN APPLIED SCIENCE.

--- LENGTH OF PROGRAM: THE PROGRAM IS DESIGNED TO BE COMPLETED IN 2 YEARS.

- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE ASSOCIATE DEGREE 'NURSING' PROGRAM IS DESIGNED TO PREPARE STUDENTS TO WORK AS REGISTERED NURSES IN ENTRY-LEVEL POSITIONS. GRADUATES MAY TAKE THE MINNESOTA STATE BOARD TEST POOL EXAMINATIONS FOR REGISTERED NURSE LICENSURE. STUDENTS COMPLETE GENERAL EDUCATION COURSES AND SPECIALIZED NURSING COURSES. THEY ALSO PARTICIPATE IN CLINICAL LEARNING ACTIVITIES.

--- DEGREES OFFERED: GRADUATES ARE AWARDED AN ASSOCIATE IN SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THE NURSING PROGRAM IS 2 YEARS LONG.

- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' PROGRAM IS DESIGNED TO PROVIDE STUDENTS WITH THEORY AND PRACTICAL EXPERIENCE IN NURSING SKILLS. GRADUATES OF THIS PROGRAM ARE ELIGIBLE TO TAKE THE LICENSING EXAMINATION OF THE STATE BOARD OF NURSING. STUDENTS TAKE LECTURE AND LABORATORY CLASSES

AND RECEIVE THEIR CLINICAL EXPERIENCE AT THE LOCAL HOSPITAL AND NURSING HOME.

--- DEGREES OFFERED: GRADUATES OF THE PROGRAM MAY RECEIVE A CERTIFICATE OF COMPETENCY OR A CERTIFICATE OF ATTENDANCE. GRADUATES MAY CHOOSE TO MAKE APPLICATION TO THE HIBBING COMMUNITY COLLEGE NURSING ASSOCIATE DEGREE PROGRAM.

--- LENGTH OF PROGRAM: THE CERTIFICATE PROGRAM IS 38 WEEKS LONG. THE DEGREE PROGRAM IS 2 YEARS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS, UNIFORMS, AND EQUIPMENT.

- - - - - 27156 NORMANDALE COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: NORMANDALE OFFERS TWO 'NURSING' PROGRAMS. THE 'TWO-YEAR' PROGRAM PREPARES STUDENTS WHO HAVE NO PREVIOUS NURSING BACKGROUND TO BECOME REGISTERED NURSES. THE 'ONE-YEAR L.P.N. CAREER MOBILITY' PROGRAM ALLOWS LICENSED PRACTICAL NURSES TO OBTAIN AN ASSOCIATE DEGREE. GRADUATES OF BOTH PROGRAMS ARE QUALIFIED TO TAKE THE MINNESOTA STATE BOARD OF NURSING EXAMINATION FOR LICENSURE AS A REGISTERED NURSE.

--- DEGREES OFFERED: GRADUATES OF BOTH PROGRAMS RECEIVE THE ASSOCIATE IN SCIENCE DEGREE IN NURSING.

--- LENGTH OF PROGRAM: THE L.P.N. CAREER MOBILITY PROGRAM IS 4 QUARTERS INCLUDING SUMMER. THE REGULAR R.N. PROGRAM IS 6 QUARTERS LONG.

--- SPECIAL COSTS: UNIFORMS AND SHOES, BOOKS, AND INSURANCE WILL COST \$400-\$500. STUDENTS ARE RESPONSIBLE FOR THEIR OWN TRANSPORTATION TO CLINICAL FACILITIES.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE ASSOCIATE DEGREE 'NURSING' PROGRAM IS OFFERED JOINTLY BY INVER HILLS AND LAKEWOOD COMMUNITY COLLEGES. IT TRAINS STUDENTS FOR CAREERS AS REGISTERED NURSES WHO ADMINISTER SAFE, PATIENT CENTERED, NURSING CARE IN HOSPITALS, NURSING HOMES, CLINICS, DOCTORS' OFFICES OR OTHER HEALTH CARE FACILITIES. GRADUATES OF THE PROGRAM ARE ELIGIBLE TO TAKE THE MINNESOTA STATE BOARD TEST POOL EXAMINATIONS FOR LICENSURE AS REGISTERED NURSES. STUDENTS COMPLETE COURSES IN GENERAL EDUCATION AND NURSING SCIENCE AS WELL AS CLINICAL LEARNING EXPERIENCES.

--- DEGREES OFFERED: GRADUATES EARN AN ASSOCIATE DEGREE.

--- LENGTH OF PROGRAM: NURSING IS A TWO YEAR PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL BE ABOUT \$300 PER YEAR FOR INSURANCE, BOOKS, AND UNIFORMS.

- - - - - 83004 SAINT MARY'S JUNIOR COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'NURSING' PROGRAM PREPARES STUDENTS TO GIVE DIRECT NURSING CARE TO PATIENTS. STUDENTS LEARN TO ASSESS PATIENTS' NEEDS AND TO PLAN, IMPLEMENT, AND EVALUATE NURSING ACTIVITIES BASED ON THESE NEEDS. COURSES ARE REQUIRED IN DIFFERENT ASPECTS OF NURSING, PATHOLOGY, ETHICAL PROBLEMS, HUMAN GROWTH, AND MEDICAL TERMINOLOGY. GENERAL EDUCATION COURSE WORK IS ALSO REQUIRED.

--- DEGREES OFFERED: GRADUATES OF THIS PROGRAM RECEIVE THE ASSOCIATE OF APPLIED SCIENCE DEGREE AND ARE ELIGIBLE TO TAKE THE STATE BOARD TEST POOL EXAM TO BECOME REGISTERED.

--- LENGTH OF PROGRAM: THIS IS A 7 QUARTER PROGRAM.

- - - - - 84012 MINNESOTA BIBLE COLLEGE

--- OBJECTIVES OF THE PROGRAM: A COOPERATIVE PROGRAM IN 'NURSING EDUCATION' IS OFFERED IN CONNECTION WITH ROCHESTER COMMUNITY COLLEGE. TWO

OPTIONS ARE AVAILABLE. UNDER OPTION I STUDENTS EARN 48 QUARTER HOURS AT MINNESOTA BIBLE COLLEGE AND SPEND THE NEXT TWO YEARS AT ROCHESTER COMMUNITY COLLEGE. UNDER OPTION II STUDENTS SPEND THE FIRST TWO YEARS AT MINNESOTA BIBLE COLLEGE AND THE NEXT TWO YEARS AT ROCHESTER COMMUNITY COLLEGE. STUDENTS WHO COMPLETE EITHER PLAN ARE ELIGIBLE TO TAKE STATE BOARD EXAMS FOR LICENSURE (R.N.).

— DEGREES OFFERED: THE ASSOCIATE DEGREE IN NURSING IS CONFERRED BY ROCHESTER COMMUNITY COLLEGE.

353 NURSING TRANSFER PROGRAMS:

- - - - -	26070	BEMIDJI STATE UNIVERSITY
- - - - -	26073	ST. CLOUD STATE UNIVERSITY
- - - - -	26074	WINONA STATE UNIVERSITY
- - - - -	26175	SOUTHWEST STATE UNIVERSITY
- - - - -	27147	VERMILION COMMUNITY COLLEGE
- - - - -	27150	MESABI COMMUNITY COLLEGE
- - - - -	81001	UNIVERSITY OF MINNESOTA (DULUTH)
- - - - -	81003	UNIVERSITY OF MINNESOTA (MORRIS)
- - - - -	83001	BETHANY LUTHERAN JUNIOR COLLEGE
- - - - -	83002	CROSIER SEMINARY JUNIOR COLLEGE
- - - - -	83003	GOLDEN VALLEY LUTHERAN JUNIOR COLLEGE
- - - - -	84004	CONCORDIA COLLEGE (MOORHEAD)
- - - - -	84013	NORTH CENTRAL BIBLE COLLEGE
- - - - -	84021	ST. PAUL BIBLE COLLEGE

Allied dental service programs intend to prepare people to assist dentists and orthodontists in such occupations as dental assistants, dental hygienists, and dental technicians. Dental assistant programs are designed to teach receptionist and office management procedures as well as chairside skills, such as mixing fillings and cement. Dental assistant programs are offered at private vocational schools and community colleges; they vary from certificate programs of one year or less to two-year associate degree programs. Dental assistants must pass the Dental Assistants Proficiency Exam and may be required to earn a Certificate of Radiological Proficiency (see PREP 8176).

Dental hygiene programs are designed to prepare people to apply techniques of proper mouth care and to teach patients to do the same. Skills include scaling and polishing of teeth, fluoride application, performing oral inspection, and exposing and processing dental X-rays. Programs vary from two-year associate to four-year bachelor's degrees. Community colleges, four-year colleges and universities, and private vocational schools offer programs.

Dental technology programs teach the basic methods of making dentures, crowns, bridges, and other dental work and are available at community colleges and private vocational schools. Programs may take from several months to two years; they include both lecture classes and laboratory experience. Some apprenticeship training programs are available during which the technician is paid.

---PROGRAM ADMISSION: Space in dental assisting and dental hygiene programs is often limited. Applicants should apply by mid-January for admission the following fall. Some schools require that dental hygiene applicants take the Dental Hygiene Aptitude Test. Applicants should contact the school they plan to attend to find out about required admission tests and when they are offered. Some dental hygiene programs require at least one year of chemistry prior to admission.

---TYPICAL COURSE WORK: Students in dental services programs study dental anatomy, dental equipment and materials, and methods of helping patients. Dental assisting students attend small lecture and discussion groups and take lab courses. Most programs include some or all of the following:

Communications	Chairside Procedures
X-ray Procedures	Office Procedures
Oral Pathology	Dental Terminology

Dental hygienist programs usually include both lecture and lab classes such as:

Anatomy	Nutrition
Chemistry	Psychology
Microbiology	Sociology

Dental technology programs usually include the following:

Dental Ceramics	Casting of Inlays
Dental Construction	Dental Materials

---GRADUATION REQUIREMENTS: Requirements vary. See college catalogs for details.

---THINGS TO KNOW: Dental hygienists must be licensed by the State and National Boards of Dental Examiners. See PREP 8174 for licensing details.

Dental technology graduates may take a Recognized Graduate (R.G.) test, given by the National Board for Certification. Certification requirements for dental laboratory technicians are listed in PREP 2655.

---RELATED PROGRAMS: PROG 357 Dentistry, 158 Secretarial Studies and Office Administration (for dental receptionist and dental secretary programs).

---DIRECTLY RELATED OCCUPATIONS: DESC 8174 Dental Hygienists, 8176 Dental Assistants, 2655 Dental Laboratory Technicians.

ASSOCIATED OCCUPATION: DESC 8113 Dentists.

---REFERENCES:

Board of Dentistry
717 S.E. Delaware Street
Suite 338
Minneapolis, MN 55414
(612) 296-5313

CIPS: 17.01

SCHOOLS:

- - - - - 25005 BEMIDJI AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'DENTAL ASSISTING' PROGRAM PREPARES STUDENTS TO ASSIST THE DENTIST DIRECTLY IN THE TREATMENT ROOM, BY PERFORMING BOOKKEEPING AND RECEPTION DUTIES, BY CONSTRUCTING APPLIANCES IN THE LABORATORY, AND BY TREATING THE PATIENT DIRECTLY, USING THE EXPANDED DUTIES DEFINED BY THE MINNESOTA PRACTICE ACT. INSTRUCTION INCLUDES HUMAN AND ORAL ANATOMY, BASIC MICROBIOLOGY, CLINICAL CHAIRSIDE PROCEDURES, DENTAL MATERIALS AND INSTRUMENTS, RADIOLOGY, ORAL HEALTH COUNSELING, DENTAL ETHICS, DENTAL BUSINESS ADMINISTRATION, COMMUNICATIONS, AND ACTUAL CLINICAL EXPERIENCES.

--- DEGREES OFFERED: A DIPLOMA IN DENTAL ASSISTING IS OFFERED.

--- LENGTH OF PROGRAM: THE DENTAL ASSISTING PROGRAM IS 10 1/2 MONTHS LONG.

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'DENTAL ASSISTING' PROGRAM PREPARES STUDENTS TO ASSIST THE DENTIST DIRECTLY IN THE TREATMENT ROOM, BY PERFORMING BOOKKEEPING AND RECEPTION DUTIES, BY CONSTRUCTING APPLIANCES IN THE LABORATORY, AND BY TREATING THE PATIENT DIRECTLY, USING THE EXPANDED DUTIES DEFINED BY THE MINNESOTA PRACTICE ACT. INSTRUCTION INCLUDES HUMAN AND ORAL ANATOMY, BASIC MICROBIOLOGY, CLINICAL CHAIRSIDE PROCEDURES, DENTAL MATERIALS AND INSTRUMENTS, RADIOLOGY, ORAL HEALTH COUNSELING, DENTAL ETHICS, DENTAL BUSINESS ADMINISTRATION, COMMUNICATIONS, AND ACTUAL CLINICAL EXPERIENCES.

--- DEGREES OFFERED: A DIPLOMA OF COMPLETION AND A CERTIFICATE OF ATTENDANCE IN DENTAL ASSISTING ARE OFFERED.

--- LENGTH OF PROGRAM: THE DENTAL ASSISTING PROGRAM IS 11 MONTHS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$230 FOR BOOKS AND \$50 FOR UNIFORMS.

- - - - - 25007 CANBY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'DENTAL ASSISTING' PROGRAM PREPARES STUDENTS TO ASSIST THE DENTIST DIRECTLY IN THE TREATMENT ROOM, BY

PERFORMING BOOKKEEPING AND RECEPTION DUTIES, BY CONSTRUCTING APPLIANCES IN THE LABORATORY, AND BY TREATING THE PATIENT DIRECTLY, USING THE EXPANDED DUTIES DEFINED BY THE MINNESOTA PRACTICE ACT. INSTRUCTION INCLUDES HUMAN AND ORAL ANATOMY, BASIC MICROBIOLOGY, CLINICAL CHAIRSIDE PROCEDURES, DENTAL MATERIALS AND INSTRUMENTS, RADIOLOGY, ORAL HEALTH COUNSELING, DENTAL ETHICS, DENTAL BUSINESS ADMINISTRATION, COMMUNICATIONS, AND ACTUAL CLINICAL EXPERIENCES.

--- DEGREES OFFERED: A DIPLOMA OF GRADUATION IN IS OFFERED.

--- LENGTH OF PROGRAM: THE DENTAL ASSISTING PROGRAM IS 11 MONTHS LONG.

- - - - - 25014 HIBBING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'DENTAL ASSISTING' PROGRAM PREPARES STUDENTS TO ASSIST THE DENTIST DIRECTLY IN THE TREATMENT ROOM, BY PERFORMING BOOKKEEPING AND RECEPTION DUTIES, BY CONSTRUCTING APPLIANCES IN THE LABORATORY, AND BY TREATING THE PATIENT DIRECTLY, USING THE EXPANDED DUTIES DEFINED BY THE MINNESOTA PRACTICE ACT. INSTRUCTION INCLUDES HUMAN AND ORAL ANATOMY, BASIC MICROBIOLOGY, CLINICAL CHAIRSIDE PROCEDURES, DENTAL MATERIALS AND INSTRUMENTS, RADIOLOGY, ORAL HEALTH COUNSELING, DENTAL ETHICS, DENTAL BUSINESS ADMINISTRATION, COMMUNICATIONS, AND ACTUAL CLINICAL EXPERIENCES.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE DENTAL ASSISTING PROGRAM IS 9 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$215 FOR BOOKS, SUPPLIES, EQUIPMENT, AND OTHER COSTS.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'DENTAL ASSISTING' PROGRAM PREPARES STUDENTS TO ASSIST THE DENTIST DIRECTLY IN THE TREATMENT ROOM, BY PERFORMING BOOKKEEPING AND RECEPTION DUTIES, BY CONSTRUCTING APPLIANCES IN THE LABORATORY, AND BY TREATING THE PATIENT DIRECTLY, USING THE EXPANDED DUTIES DEFINED BY THE MINNESOTA PRACTICE ACT. INSTRUCTION INCLUDES HUMAN AND ORAL ANATOMY, BASIC MICROBIOLOGY, CLINICAL CHAIRSIDE PROCEDURES, DENTAL MATERIALS AND INSTRUMENTS, RADIOLOGY, ORAL HEALTH COUNSELING, DENTAL ETHICS, DENTAL BUSINESS ADMINISTRATION, COMMUNICATIONS, AND ACTUAL CLINICAL EXPERIENCES.

THE 'DENTAL LABORATORY TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO MAKE AND REPAIR RESTORATIVE APPLIANCES REQUIRED FOR THE ORAL HEALTH OF THE PATIENT, AS PRESCRIBED BY A DENTIST. THE PRIMARY OBJECTIVE IN THIS PROGRAM IS TO TRAIN TECHNICIANS FOR THE DENTAL LABORATORY INDUSTRY AND THE AMERICAN DENTAL ASSOCIATION. INSTRUCTION INCLUDES THE CONSTRUCTION AND REPAIR OF FULL DENTURES, PARTIAL DENTURES, CERAMICS, CROWN AND BRIDGEWORK, AND ORTHODONTIC APPLIANCES.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: THE DENTAL ASSISTING PROGRAM IS 15 MONTHS LONG; THE DENTAL LABORATORY TECHNOLOGY PROGRAM IS 20 MONTHS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$305 FOR BOOKS, SUPPLIES AND EQUIPMENT FOR DENTAL ASSISTING AND \$190 FOR DENTAL LABORATORY TECHNOLOGY.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'DENTAL ASSISTING' PROGRAM PREPARES STUDENTS TO ASSIST THE DENTIST DIRECTLY IN THE TREATMENT ROOM, BY PERFORMING BOOKKEEPING AND RECEPTION DUTIES, BY CONSTRUCTING APPLIANCES IN THE LABORATORY, AND BY TREATING THE PATIENT DIRECTLY, USING THE EXPANDED DUTIES DEFINED BY THE MINNESOTA PRACTICE ACT. INSTRUCTION INCLUDES HUMAN AND ORAL ANATOMY, BASIC MICROBIOLOGY, CLINICAL CHAIRSIDE PROCEDURES, DENTAL

MATERIALS AND INSTRUMENTS, RADIOLOGY, ORAL HEALTH COUNSELING, DENTAL ETHICS, DENTAL BUSINESS ADMINISTRATION, COMMUNICATIONS, AND ACTUAL CLINICAL EXPERIENCES.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: DENTAL ASSISTING IS A 10 MONTH PROGRAM.

--- SPECIAL COSTS: COSTS WILL INCLUDE TOOLS, SUPPLIES, AND EQUIPMENT.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'DENTAL ASSISTING' PROGRAM PREPARES STUDENTS TO ASSIST THE DENTIST DIRECTLY IN THE TREATMENT ROOM, BY PERFORMING BOOKKEEPING AND RECEPTION DUTIES, BY CONSTRUCTING APPLIANCES IN THE LABORATORY, AND BY TREATING THE PATIENT DIRECTLY, USING THE EXPANDED DUTIES DEFINED BY THE MINNESOTA PRACTICE ACT. INSTRUCTION INCLUDES HUMAN AND ORAL ANATOMY, BASIC MICROBIOLOGY, CLINICAL CHAIRSIDE PROCEDURES, DENTAL MATERIALS AND INSTRUMENTS, RADIOLOGY, ORAL HEALTH COUNSELING, DENTAL ETHICS, DENTAL BUSINESS ADMINISTRATION, COMMUNICATIONS, AND ACTUAL CLINICAL EXPERIENCES.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 11 MONTHS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$260 FOR BOOKS AND SUPPLIES.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'DENTAL ASSISTING' PROGRAM PREPARES STUDENTS TO ASSIST THE DENTIST DIRECTLY IN THE TREATMENT ROOM, BY PERFORMING BOOKKEEPING AND RECEPTION DUTIES, BY CONSTRUCTING APPLIANCES IN THE LABORATORY, AND BY TREATING THE PATIENT DIRECTLY USING, THE EXPANDED DUTIES DEFINED BY THE MINNESOTA PRACTICE ACT. INSTRUCTION INCLUDES HUMAN AND ORAL ANATOMY, BASIC MICROBIOLOGY, CLINICAL CHAIRSIDE PROCEDURES, DENTAL MATERIALS AND INSTRUMENTS, RADIOLOGY, ORAL HEALTH COUNSELING, DENTAL ETHICS, DENTAL BUSINESS ADMINISTRATION, COMMUNICATIONS, AND ACTUAL CLINICAL EXPERIENCES.

THE 'DENTAL LABORATORY TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO MAKE AND REPAIR RESTORATIVE APPLIANCES REQUIRED FOR THE ORAL HEALTH OF THE PATIENT, AS PRESCRIBED BY A DENTIST. THE PRIMARY OBJECTIVE IN THIS PROGRAM IS TO TRAIN TECHNICIANS FOR THE DENTAL LABORATORY INDUSTRY AND THE AMERICAN DENTAL ASSOCIATION. INSTRUCTION INCLUDES THE CONSTRUCTION AND REPAIR OF FULL DENTURES, PARTIAL DENTURES, CERAMICS, CROWN AND BRIDGEWORK, AND ORTHODONTIC APPLIANCES.

--- DEGREES OFFERED: A DIPLOMA OF RECOGNITION IS OFFERED.

--- LENGTH OF PROGRAM: THE DENTAL ASSISTING PROGRAM REQUIRES 12 MONTHS TO COMPLETE. DENTAL LABORATORY TECHNOLOGY TAKES 20 MONTHS TO COMPLETE.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$250 FOR BOOKS AND SUPPLIES FOR DENTAL ASSISTING AND \$290 FOR DENTAL LABORATORY TECHNOLOGY.

- - - - - 26071 MANKATO STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'DENTAL ASSISTING' PROGRAM PROVIDES THE STUDENT WITH KNOWLEDGE IN LABORATORY PROCEDURES, DENTAL OFFICE MANAGEMENT, PATIENT EDUCATION, AND CHAIRSIDE PROCEDURES IN THE DENTAL AUXILIARY FIELD. THE 'DENTAL HYGIENE' PRO-GRAM PROVIDES THE STUDENT WITH CLASSROOM AND CLINICAL EXPERIENCE IN DENTAL HYGIENE. COURSES OFFERED INCLUDE DENTAL ANATOMY, RADIOLOGY AND PERIODONTICS.

--- DEGREES OFFERED: A CERTIFICATE OF DENTAL ASSISTING OR ASSOCIATE OF SCIENCE DEGREE IN DENTAL HYGIENE ARE OFFERED.

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'DENTAL LAB TECHNOLOGY' PROGRAM IS OFFERED JOINTLY WITH THE SUBURBAN HENNEPIN COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE. STUDENTS COMPLETE GENERAL EDUCATION COURSES, TECHNICAL COURSES, AND A SUPERVISED INTERNSHIP.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS TWO YEARS LONG. ONE YEAR IS SPENT AT SUBURBAN HENNEPIN COUNTY AVTI AND ONE YEAR IS SPENT AT NORTH HENNEPIN COMMUNITY COLLEGE.

- - - - - 27156 NORMANDALE COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'DENTAL ASSISTING' PROGRAM PREPARES STUDENTS TO ASSIST DENTISTS IN OFFICE AND PRACTICE. GRADUATES ARE ELIGIBLE TO WRITE THE DENTAL ASSISTING NATIONAL BOARD CERTIFICATE EXAM AND THE MINNESOTA BOARD OF DENTISTRY EXAM TO BECOME A REGISTERED DENTAL ASSISTANT IN MINNESOTA. COURSES INCLUDE DENTAL ASSISTING, DENTAL MATERIALS, DENTAL ANATOMY, RADIOLOGY AND PREVENTIVE DENTISTRY, ANATOMY AND PHYSIOLOGY. THE 'DENTAL HYGIENE' PROGRAM PREPARES STUDENTS FOR LICENSURE BY THE STATE BOARD OF DENTISTRY. LICENSED GRADUATES PERFORM DIRECT DENTAL SERVICES UNDER THE SUPERVISION OF A DENTIST. STUDENTS TAKE COURSES IN THE BASIC SCIENCES AND LIBERAL ARTS AS WELL AS DENTAL SCIENCE COURSES LIKE DENTAL HYGIENE AND ANATOMY, RADIOLOGY AND PREVENTIVE DENTISTRY, PERIODONTOLOGY, PHARMACOLOGY, NUTRITION, PATHOLOGY, AND DENTAL HEALTH.

--- DEGREES OFFERED: GRADUATES OF THE PROGRAM EARN A DENTAL ASSISTING CERTIFICATE. CREDITS MAY BE APPLIED TOWARD AN ASSOCIATE IN ARTS DEGREE. GRADUATES OF DENTAL HYGIENE RECEIVE AN ASSOCIATE OF SCIENCE DEGREE AND A GRADUATE DENTAL HYGIENIST CERTIFICATE.

--- LENGTH OF PROGRAM: THE DENTAL ASSISTING PROGRAM MAY BE COMPLETED IN 3 QUARTERS PLUS 2 SUMMER SESSIONS. DENTAL HYGIENE IS A 2 YEAR PROGRAM.

--- SPECIAL COSTS: BOOKS, UNIFORMS AND SHOES, SAFETY GLASSES, INSURANCE, AND TRANSPORTATION TO CLINIC FACILITIES WILL COST ABOUT \$800 - \$1400.

- - - - - 81001 UNIVERSITY OF MINNESOTA (DULUTH)

--- OBJECTIVES OF THE PROGRAM: THE 'DENTAL HYGIENE' PROGRAM IS A TWO YEAR TRAINING PROGRAM. UPON SUCCESSFUL COMPLETION OF THE TRAINING, GRADUATES ARE QUALIFIED TO TAKE NATIONAL AND REGIONAL BOARD EXAMINATIONS IN ORDER TO OBTAIN A LICENSE TO PRACTICE DENTAL HYGIENE. SOME REQUIRED COURSES ARE: HEAD AND NECK ANATOMY, PHARMACOLOGY, ANESTHESIOLOGY, CLINICAL DENTAL HYGIENE, AND DENTAL HEALTH EDUCATION.

--- DEGREES OFFERED: AN ASSOCIATE OF SCIENCE DEGREE IS OFFERED.

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: THE 2-YEAR 'DENTAL HYGIENE' PROGRAM OFFERED THROUGH THE COLLEGE OF DENTISTRY PREPARES PEOPLE FOR LICENSURE AS DENTAL HYGIENISTS. STUDENTS ENTER THIS PROGRAM AFTER COMPLETING APPROXIMATELY 30 CREDITS OF PREREQUISITE COURSEWORK IN ANATOMY, BIOLOGY, CHEMISTRY, ENGLISH, PSYCHOLOGY, SOCIOLOGY, PUBLIC SPEAKING AND NUTRITION. AFTER COMPLETING THE 2-YEAR PROGRAM STUDENTS MAY CHOOSE TO PURSUE A BACHELOR'S DEGREE THROUGH UNIVERSITY COLLEGE.

--- DEGREES OFFERED: GRADUATES OF THE 2-YEAR PROGRAM EARN THE GRADUATE DENTAL HYGIENIST DEGREE. AT THE GRADUATE LEVEL, THE SCHOOL OF PUBLIC HEALTH OFFERS THE MASTER OF PUBLIC HEALTH DEGREE IN DENTAL PUBLIC HEALTH.

- - - - - 81037 LAKELAND MEDICAL-DENTAL ACADEMY

--- OBJECTIVES OF THE PROGRAM: THE 'DENTAL ASSISTANT' PROGRAM TRAINS

STUDENTS FOR ENTRY-LEVEL POSITIONS AS DENTAL ASSISTANTS. THIS INCLUDES THE PREPARATION OF INDIVIDUALS FOR BOTH CHAIRSIDE ASSISTING AND ADMINISTRATIVE RESPONSIBILITIES. COURSES OF STUDY INCLUDE THE FOLLOWING: BIOLOGICAL SCIENCES, DENTAL MATERIALS, CHAIRSIDE ASSISTING, DENTAL EMERGENCIES, EXPANDED FUNCTION, DENTAL RECORDS, RADIOLOGY, INTRODUCTION TO PRACTICES OF DENTISTRY, ETHICS/JURISPRUDENCE, DENTAL BUSINESS PROCEDURES, CLINICAL ROTATION, AND DENTAL INTERPERSONAL COMMUNICATIONS. AN 8 WEEK EXTERNSHIP IN A DENTAL OFFICE OR CLINIC MUST ALSO BE SUCCESSFULLY COMPLETED BEFORE GRADUATION. THIS PROGRAM IS ACCREDITED BY THE AMERICAN DENTAL ASSOCIATION. BECAUSE THIS IS AN ADA ACCREDITED PROGRAM, GRADUATES ARE ELIGIBLE TO WRITE THE NATIONAL CERTIFICATION EXAMINATION OF THE DENTAL ASSISTING NATIONAL BOARD AND TO TAKE THE MINNESOTA REGISTRATION EXAM. IF THEY PASS THESE EXAMS, THEY MAY USE THE LETTERS "CDA, RDA" AFTER THEIR NAME.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED AFTER SUCCESSFUL COMPLETION OF THE EXTERNSHIP.

--- LENGTH OF PROGRAM: THE PROGRAM IS 32 WEEKS (8 MONTHS) LONG. (EQUIVALENT TO ONE ACADEMIC YEAR.) REDUCED/INDIVIDUAL SCHEDULES ARE AVAILABLE FOR STUDENTS WHO WISH TO ATTEND SCHOOL ON A PART-TIME BASIS, THUS TAKING A REDUCED NUMBER OF HOURS PER WEEK FOR A LONGER PERIOD OF TIME.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE EXPENDABLE SUPPLIES, LAB BREAKAGE FEE, BOOK RENTAL, UNIFORMS AND SHOES.

- - - - - 82022 MEDICAL INSTITUTE OF MINNESOTA

--- OBJECTIVES OF THE PROGRAM: THE 'DENTAL ASSISTANT' PROGRAM PREPARES STUDENTS FOR WORK IN A GENERAL OR SPECIALTY DENTAL PRACTICE. COURSE WORK INCLUDES: CHAIRSIDE ASSISTING, DENTAL MATERIALS, ANATOMY, MICROBIOLOGY, PHARMACOLOGY, RADIOLOGY, DENTAL SPECIALTIES, PATIENT MANAGEMENT, BUSINESS ADMINISTRATION AND LAB SKILLS. THE STUDENT MUST ALSO SUCCESSFULLY COMPLETE AN EXTERNSHIP IN AN AFFILIATED DENTAL OFFICE.

--- DEGREES OFFERED: A CERTIFICATE OF GRADUATION IS GRANTED UPON COMPLETION OF THE PROGRAM.

--- LENGTH OF PROGRAM: THE PROGRAM IS TWO QUARTERS IN RESIDENCE PLUS ONE QUARTER IN A COMBINATION OF IN RESIDENCE PLUS CLINICAL EXPERIENCE.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE UNIFORMS AND BOOKS.

- - - - - 82025 MINNESOTA INSTITUTE OF MEDICAL AND DENTAL ASSISTANTS

--- OBJECTIVES OF THE PROGRAM: THE 'DENTAL ASSISTING' PROGRAM PREPARES STUDENTS FOR CAREERS AS DENTAL ASSISTANTS. AREAS OF STUDY INCLUDE DENTAL ANATOMY, X-RAY, MIXING FILLINGS, AND EXPANDED DUTIES. STUDENTS ALSO PARTICIPATE IN COURSES IN LABORATORY, PATIENT RELATIONS, AND OFFICE PROCEDURES AND ADMINISTRATION. DURING THE TRAINING, STUDENTS SPEND 320 HOURS WORKING FOR AN AFFILIATED DENTAL PRACTICE OR CLINIC.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS ISSUED AFTER COMPLETION OF FORMAL CLASS TRAINING AND A DIPLOMA IS ISSUED AFTER COMPLETION OF CLINICAL TRAINING.

--- LENGTH OF PROGRAM: THE DENTAL ASSISTANT TRAINING PROGRAM IS 40 WEEKS INCLUDING 320 HOURS OF CLINICAL EXPERIENCE IN A DENTAL OFFICE.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE UNIFORMS.

358 ALLIED DENTAL SERVICES TRANSFER PROGRAMS:

- - - - - 26074 WINONA STATE UNIVERSITY
- - - - - 27139 AUSTIN COMMUNITY COLLEGE
- - - - - 27140 BRAINERD COMMUNITY COLLEGE
- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE
- - - - - 27143 HIBBING COMMUNITY COLLEGE

- - - - -	27144	ITASCA COMMUNITY COLLEGE
- - - - -	27145	WILLMAR COMMUNITY COLLEGE
- - - - -	27146	WORTHINGTON COMMUNITY COLLEGE
- - - - -	27147	VERMILION COMMUNITY COLLEGE
- - - - -	27148	ROCHESTER COMMUNITY COLLEGE
- - - - -	27149	NORTHLAND COMMUNITY COLLEGE
- - - - -	27150	MESABI COMMUNITY COLLEGE
- - - - -	27152	ANOKA-RAMSEY COMMUNITY COLLEGE
- - - - -	27154	LAKEWOOD COMMUNITY COLLEGE
- - - - -	27155	RAINY RIVER COMMUNITY COLLEGE
- - - - -	27157	INVER HILLS COMMUNITY COLLEGE
- - - - -	83002	CROSIER SEMINARY JUNIOR COLLEGE
- - - - -	84013	NORTH CENTRAL BIBLE COLLEGE
- - - - -	84014	NORTHWESTERN COLLEGE
- - - - -	84015	PILLSBURY COLLEGE
- - - - -	84023	COLLEGE OF ST. TERESA

Medical assisting programs intend to provide people with administrative and basic medical office skills. These skills include scheduling patients, maintaining medical histories, assisting in examinations, performing certain diagnostic and laboratory work, and sterilizing instruments.

Medical assisting programs vary from six-month certificate programs to two-year associate degree programs. These programs are offered at vocational technical schools, community colleges, four-year colleges and universities, and private commercial schools. Medical assistants may be certified and/or registered. (See PREP 8195.)

---PROGRAM ADMISSION: Applicants to medical assisting programs must have a high school diploma or its equivalent, or be beyond the age of compulsory school attendance and show they can benefit from the program. Students must submit evidence to the school of good health before they start training. A background in chemistry, biology, bookkeeping, and math is helpful. Some medical assisting programs have admissions tests and other specific entrance requirements. Students should contact the school of their choice for more information.

---TYPICAL COURSE WORK: Most programs in medical assisting include the following core subjects. These subjects are taught through lectures, outside reading, typing practice, and laboratory and on-the-job experience.

Anatomy/Basic Human	Records Management
Systems	Medical Office Clinical Procedures
Medical Terminology	Medical Law and Ethics Procedures
Medical Laboratory	Medical Office Business Procedures
Psychology	Pharmacology

---GRADUATION REQUIREMENTS: Accredited medical assisting programs require students to complete a 160 hour externship. See school catalogs for more information.

---THINGS TO KNOW: Some medical offices offer informal, on-the-job medical assisting training.

---RELATED PROGRAMS: PROG 158 Secretarial Studies and Office Administration (for medical secretary programs), 353 Nursing, 163 Medical Records Administration, 358 Allied Dental Services, 363 Medicine.

---DIRECTLY RELATED OCCUPATIONS: DESC 8195 Medical Assistants.

ASSOCIATED OCCUPATIONS: DESC 1436 Medical Records Technicians, 1438 Medical Secretaries, 1134 Health Services Administrators.

---REFERENCES: For a list of accredited medical assistant schools write to:
Accrediting Bureau of Health Education Schools
29089 U.S. 20 West
Elkhart, IN 46514

CIPS: 17.0503

SCHOOLS:

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL ASSISTANT EDUCATION' PROGRAM PREPARES INDIVIDUALS TO ASSIST A PHYSICIAN BY PERFORMING FUNCTIONS RELATED TO BOTH BUSINESS ADMINISTRATION AND CLINICAL DUTIES OF A MEDICAL OFFICE. BUSINESS ASPECTS OF INSTRUCTION INCLUDE INSURANCE, ACCOUNTS, REPORTS, MEDICAL RECORDS, AND MEDICAL TRANSCRIPTION. CLINICAL ASPECTS OF INSTRUCTION INCLUDE PREPARING THE PATIENT FOR EXAMINATION, ASSESSING VITAL SIGNS, ASSISTING WITH EXAMINATION AND TREATMENT, ROUTINE LABORATORY PROCEDURES, AND USING THE ELECTROCARDIOGRAPH MACHINE.
--- DEGREES OFFERED: A DIPLOMA AND CERTIFICATE ARE OFFERED.
--- LENGTH OF PROGRAM: THE MEDICAL ASSISTANT PROGRAM IS 9 MONTHS LONG.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL ASSISTANT EDUCATION' PROGRAM PREPARES INDIVIDUALS TO ASSIST A PHYSICIAN BY PERFORMING FUNCTIONS RELATED TO BOTH BUSINESS ADMINISTRATION AND CLINICAL DUTIES OF A MEDICAL OFFICE. BUSINESS ASPECTS OF INSTRUCTION INCLUDE INSURANCE, ACCOUNTS, REPORTS, MEDICAL RECORDS, AND MEDICAL TRANSCRIPTION. CLINICAL ASPECTS OF INSTRUCTION INCLUDE PREPARING THE PATIENT FOR EXAMINATION, ASSESSING VITAL SIGNS, ASSISTING WITH EXAMINATION AND TREATMENT, ROUTINE LABORATORY PROCEDURES, AND USING THE ELECTROCARDIOGRAPH MACHINE.
THE 'CENTRAL SERVICE TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO ADJUST, CLEAN, STERILIZE, AND ASSEMBLE MEDICAL EQUIPMENT, SUPPLIES, AND INSTRUMENTS ACCORDING TO PRESCRIBED PROCEDURES AND TECHNIQUES. INSTRUCTION INCLUDES INSPECTION, EVALUATION, AND PURCHASING OF EQUIPMENT AND MATERIALS AND THE DISTRIBUTION AND INVENTORY OF EQUIPMENT SUPPLIES.
THE 'PHARMACY ASSISTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST THE PHARMACIST IN PERFORMING ROUTINE DUTIES RELATED TO MAINTAINING AND DISPENSING PHARMACEUTICAL SUPPLIES. INSTRUCTION INCLUDES PREPARING AND DISPENSING MEDICATION UNDER THE SUPERVISION OF A REGISTERED PHARMACIST.
--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.
--- LENGTH OF PROGRAM: THE MEDICAL ASSISTANT PROGRAM IS 16 MONTHS LONG.
--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$267 FOR BOOKS, SUPPLIES, AND EQUIPMENT FOR MEDICAL ASSISTANT.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL ASSISTANT EDUCATION' PROGRAM PREPARES INDIVIDUALS TO ASSIST A PHYSICIAN BY PERFORMING FUNCTIONS RELATED TO BOTH BUSINESS ADMINISTRATION AND CLINICAL DUTIES OF A MEDICAL OFFICE. BUSINESS ASPECTS OF INSTRUCTION INCLUDE INSURANCE, ACCOUNTS, REPORTS, MEDICAL RECORDS, AND MEDICAL TRANSCRIPTION. CLINICAL ASPECTS OF INSTRUCTION INCLUDE PREPARING THE PATIENT FOR EXAMINATION, ASSESSING VITAL SIGNS, ASSISTING WITH EXAMINATION AND TREATMENT, ROUTINE LABORATORY PROCEDURES, AND USING THE ELECTROCARDIOGRAPH MACHINE.
--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY OR A CERTIFICATE IS AWARDED.
--- LENGTH OF PROGRAM: THE PROGRAM LASTS 13 1/2 MONTHS.
--- SPECIAL COSTS: COSTS WILL INCLUDE ABOUT \$215 FOR BOOKS (ALL USABLE BOOKS ARE BOUGHT BACK AT 70 PERCENT OF PAID PRICE) AND \$35 FOR UNIFORMS.

- - - - - 25032 EAST GRAND FORKS AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL ASSISTANT EDUCATION' PROGRAM PREPARES INDIVIDUALS TO ASSIST A PHYSICIAN BY PERFORMING FUNCTIONS RELATED TO BOTH BUSINESS ADMINISTRATION AND CLINICAL DUTIES OF A MEDICAL OFFICE.

BUSINESS ASPECTS OF INSTRUCTION INCLUDE INSURANCE, ACCOUNTS, REPORTS, MEDICAL RECORDS, AND MEDICAL TRANSCRIPTION. CLINICAL ASPECTS OF INSTRUCTION INCLUDE PREPARING THE PATIENT FOR EXAMINATION, ASSESSING VITAL SIGNS, ASSISTING WITH EXAMINATION AND TREATMENT, ROUTINE LABORATORY PROCEDURES, AND USING THE ELECTROCARDIOGRAPH MACHINE.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE MEDICAL ASSISTANT PROGRAM IS 12 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS, SUPPLIES, EQUIPMENT AND OTHER COSTS.

- - - - - 27156 NORMANDALE COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL ASSISTANT' PROGRAM PREPARES STUDENTS TO ASSIST PHYSICIANS IN THEIR OFFICES OR OTHER MEDICAL SETTINGS. STUDENTS TAKE COURSES IN CHEMISTRY, ANATOMY, PHYSIOLOGY, NUTRITION, PSYCHOLOGY AND HEALTH. OTHER COURSES RELATE TO ADMINISTRATIVE DUTIES INCLUDING RECORD KEEPING, CORRESPONDENCE, ACCOUNTING AND TYPING. MEDICAL ASSISTANT COURSES DEVELOP COMPETENCIES IN TAKING X-RAYS, PERFORMING LABORATORY TESTS, AND PERFORMING NURSING PROCEDURES COMMONLY DONE IN THE DOCTOR'S OFFICE.

--- DEGREES OFFERED: GRADUATES EARN AN ASSOCIATE IN APPLIED SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THIS IS A TWO YEAR PROGRAM.

--- SPECIAL COSTS: BOOKS, UNIFORM AND SHOES, INSURANCE, AND TRANSPORTATION TO CLINIC FACILITIES WILL COST ABOUT \$600.

- - - - - 81037 LAKELAND MEDICAL-DENTAL ACADEMY

--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL ASSISTANT' PROGRAM TRAINS STUDENTS FOR ENTRY-LEVEL POSITIONS AS MEDICAL ASSISTANTS. COURSES OF STUDY INCLUDE THE FOLLOWING: ANATOMY AND PHYSIOLOGY, MEDICAL LAW AND ETHICS, TYPING, MEDICAL BUSINESS PROCEDURES, SECRETARIAL SKILLS, CASE HISTORY STUDIES, COMMUNICATIONS, ELECTROCARDIOGRAPHY, HEMATOLOGY, MICROBIOLOGY AND LAB REVIEW, NURSING ARTS, RADIOGRAPHY, MEDICAL TERMS, TRANSCRIPTION, URINALYSIS, PSYCHOLOGY, AND FIRST AID/CPR. AN 8 WEEK EXTERNSHIP IN A PHYSICIAN'S OFFICE OR CLINIC MUST BE SUCCESSFULLY COMPLETED IN ORDER TO GRADUATE. THIS PROGRAM IS APPROVED BY THE AMERICAN MEDICAL ASSOCIATION. BECAUSE THIS IS AN AMA ACCREDITED PROGRAM, GRADUATES ARE ELIGIBLE TO WRITE THE CERTIFIED MEDICAL ASSISTANT NATIONAL EXAMINATION OF THE AAMA. IF THEY PASS THESE EXAMS, THEY CAN USE THE LETTERS "CMA" AFTER THEIR NAME.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED AFTER SUCCESSFUL COMPLETION OF THE EXTERNSHIP.

--- LENGTH OF PROGRAM: THE PROGRAM IS 32 WEEKS (8 MONTHS) LONG. REDUCED/INDIVIDUAL SCHEDULES ARE AVAILABLE FOR STUDENTS WHO WISH TO ATTEND SCHOOL ON A PART-TIME BASIS THUS TAKING A REDUCED NUMBER OF HOURS PER WEEK FOR A LONGER PERIOD OF TIME.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE EXPENDABLE SUPPLIES, LAB BREAKAGE FEE, BOOK RENTAL AND UNIFORMS AND SHOES.

- - - - - 82022 MEDICAL INSTITUTE OF MINNESOTA

--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL ASSISTANT' PROGRAM PREPARES STUDENTS FOR WORK IN A PHYSICIAN'S OFFICE OR CLINIC AS A MEDICAL ASSISTANT. COURSE WORK INCLUDES: ANATOMY/PHYSIOLOGY, PHARMACOLOGY, MEDICAL ASSISTANCE, MEDICAL OFFICE SKILLS, MEDICAL BUSINESS PROCEDURES, AND LAB SKILLS. THE STUDENT MUST ALSO SUCCESSFULLY COMPLETE AN EXTERNSHIP WITH AN AFFILIATED PHYSICIAN'S OFFICE OR CLINIC.

--- DEGREES OFFERED: A CERTIFICATE OF GRADUATION IS GRANTED UPON

COMPLETION OF THE PROGRAM. AN ASSOCIATE DEGREE IS AVAILABLE FOR THOSE WITH SUFFICIENT COLLEGE CREDIT.

--- LENGTH OF PROGRAM: THE PROGRAM IS 3 QUARTERS IN RESIDENCE PLUS 8 WEEKS CLINICAL EXPERIENCE.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE UNIFORMS AND BOOKS.

- - - - - 82025 MINNESOTA INSTITUTE OF MEDICAL AND DENTAL ASSISTANTS

--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL ASSISTING' COURSE PREPARES STUDENTS FOR CAREERS AS MEDICAL ASSISTANTS. AREAS OF STUDY INCLUDE ANATOMY AND PHYSIOLOGY, TREATMENT ROOM PROCEDURES, TECHNIQUES OF X-RAY AND LABORATORY, PATIENT RELATIONS, AND OFFICE PROCEDURES AND ADMINISTRATION. UPON SUCCESSFUL COMPLETION OF CLASSROOM STUDY, STUDENTS PARTICIPATE IN CLINICAL TRAINING IN AN AFFILIATED PRIVATE PRACTICE OR CLINIC SETTING.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS ISSUED AFTER COMPLETION OF FORMAL CLASS TRAINING AND A DIPLOMA IS ISSUED AFTER COMPLETION OF CLINICAL TRAINING.

--- LENGTH OF PROGRAM: THE MEDICAL ASSISTANT PROGRAM IS 24 WEEKS PLUS 8 WEEKS OF CLINICAL TRAINING.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE UNIFORMS.

- - - - - 82042 STRATFORD SCHOOL

--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL ASSISTANT' PROGRAM TRAINS STUDENTS FOR EMPLOYMENT AS MEDICAL ASSISTANTS. STUDENTS COMPLETE STUDIES IN CLINICAL LABORATORY WORK, MEDICAL TECHNICIAN SKILLS, GENERAL SECRETARIAL SKILLS, AND SPECIALIZED SKILLS, SUCH AS KNOWLEDGE OF MEDICAL TERMINOLOGY, NEEDED BY A MEDICAL ASSISTANT.

--- DEGREES OFFERED: GRADUATES OF THIS PROGRAM RECEIVE CERTIFICATES.

--- LENGTH OF PROGRAM: THIS PROGRAM REQUIRES 1140 HOURS, OR 42 WEEKS OR STUDY, INCLUDING A 6 WEEK EXTERNSHIP IN A MEDICAL FACILITY.

366 MEDICAL ASSISTING TRANSFER PROGRAMS:

- - - - - 26073 ST. CLOUD STATE UNIVERSITY

- - - - - 26074 WINONA STATE UNIVERSITY

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

Programs in rehabilitation services intend to prepare people to become occupational therapists, physical therapists, recreational therapists, and activity therapists. There are many specializations within these fields, such as art therapy, dance therapy, manual arts therapy, and music therapy. Therapists work under the direction of a physician to assist patients in overcoming or compensating for any loss of function, and in restoring physical and mental health.

Some four year colleges and universities offer programs designed to prepare people to be licensed or certified therapists. Normally these programs are four-year bachelor's degree programs, which are followed by six to nine months of clinical experience, before students are eligible to be certified or licensed. Many four-year colleges and universities offer from one to three years of an appropriate science curriculum as pre-professional training which can then be transferred to a school offering a therapy degree program. A few community colleges offer two-year associate degree programs which are designed to prepare people to assist certified or licensed therapists.

---PROGRAM ADMISSION: A high school diploma is normally required for admission to college and university programs. A background in science and math is recommended.

---TYPICAL COURSE WORK: Course work varies with specialty. Most programs include all or most of the following:

Anatomy	Psychology
Physiology	Sociology
Neurology	Biomechanics
Human Growth and Development	Physical Education

Instruction includes lectures, scientific reading and technical report writing, and practical experience with therapy techniques. Bachelor degree programs also include general background courses such as social sciences, English, and speech.

---GRADUATION REQUIREMENTS: Requirements vary. See college catalogs for more information.

---THINGS TO KNOW: In some states, completion of a two-year associate degree program is a prerequisite for taking a licensing exam as a physical therapy assistant.

Art therapy usually requires a master's degree or its equivalent in institutional training.

A six month clinical internship at a treatment facility approved by the National Association for Music Therapy, Inc. follows course work in music therapy and is required for graduation.

---RELATED PROGRAMS: PROG 387 Other Health Technologies, 237 Special Education, 311 Art, 314 Music, 315 Dance, 564 Recreation.

---DIRECTLY RELATED OCCUPATIONS: DESC 8125 Occupational Therapists, 8177 Physical Therapists, 8443 Recreational Therapists.

ASSOCIATED OCCUPATIONS: DESC 8127 Speech Pathologists, 8129 Audiologists, 8162 Registered Nurses, 8169 Respiratory Therapists, 8486

Recreation Leaders.

---REFERENCES:

American Occupational Therapy Association
1383 Piccard Drive
Rockville, MD 20850

American Physical Therapy Association
1156 15th St., NW
Washington, DC 20005

National Association for Music Therapy, Inc.
901 Kentucky, Suite 206
P.O. Box 610
Lawrence, KS 66044

Rehabilitation Services
Department of Labor and Industry
444 Lafayette Road
St. Paul, MN 55101

CIPS: 17.08 (except 17.0818 and 17.0819)

SCHOOLS:

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'OCCUPATIONAL THERAPY ASSISTANT' PROGRAM PREPARES INDIVIDUALS TO ASSIST AN OCCUPATIONAL THERAPIST IN IMPLEMENTING THE PLAN OF THERAPY FOR A PATIENT PRESCRIBED BY A PHYSICIAN. INSTRUCTION INCLUDES DEVELOPMENT, BODY STRUCTURE AND FUNCTION, O.T. SKILLS, THEORY OF DYSFUNCTION, O.T. TREATMENT PRINCIPLES AND FIELD WORK EXPERIENCE.

--- DEGREES OFFERED: A DIPLOMA IN OCCUPATIONAL THERAPY ASSISTANT IS OFFERED. IT IS AN ASSOCIATE DEGREE PROGRAM WITH CONCURRENT STUDY AT ANOKA-RAMSEY COMMUNITY COLLEGE.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 24 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$250 FOR BOOKS AND SUPPLIES AND A \$10 LAB FEE.

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'OCCUPATIONAL THERAPY ASSISTANT' PROGRAM PREPARES INDIVIDUALS TO ASSIST AN OCCUPATIONAL THERAPIST IN IMPLEMENTING THE PLAN OF THERAPY FOR A PATIENT PRESCRIBED BY A PHYSICIAN. INSTRUCTION INCLUDES DEVELOPMENT, BODY STRUCTURE AND FUNCTION, O.T. SKILLS, THEORY OF DYSFUNCTION, O.T. TREATMENT PRINCIPLES AND FIELD WORK EXPERIENCE.

--- DEGREES OFFERED: GRADUATES MAY BE CERTIFIED BY THE AMERICAN OCCUPATIONAL THERAPY ASSOCIATION. A CERTIFICATE OR DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED. OTA STUDENTS ALSO MAY OPT FOR AN ASSOCIATE OF ARTS DEGREE FROM VERMILLION COMMUNITY COLLEGE, ELY, BY COMPLETING ONE ACADEMIC YEAR OF GENERAL EDUCATION COURSE WORK THERE BEFORE OR AFTER THEIR D.A.V.T.I. ENROLLMENT.

--- LENGTH OF PROGRAM: THIS PROGRAM IS UP TO 76 WEEKS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$320 FOR BOOKS, SUPPLIES, EQUIPMENT AND OFF-CAMPUS PRACTICUM EXPENSES.

- - - - - 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HEALTH CARE OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS FOR OCCUPATIONS CONCERNED WITH HEALTH CONCEPTS RELATED TO THE PROVIDERS AND CONSUMERS OF HEALTH CARE, PREVENTATIVE HEALTH CARE, AND THE UTILIZATION OF MATERIALS, INSTRUMENTS AND EQUIPMENT IN THE HEALTH CARE AREA.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 84 WEEKS LONG.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ORTHOTICS TECHNICIAN' PROGRAM PREPARES INDIVIDUALS TO MAKE AND REPAIR BRACES AND OTHER ORTHOPEDIC APPLIANCES FOLLOWING A PHYSICIAN'S PRESCRIPTION. SKILLS REQUIRED OF THE TECHNICIAN INCLUDE THE ABILITY TO CUT AND FASHION PARTS FROM SUCH MATERIALS AS METAL, PLASTICS, PLASTER, WOOD, AND LEATHER. THE TECHNICIAN WORKS UNDER THE GUIDANCE OF THE PHYSICIAN WHO HAS PRESCRIBED AN ORTHOPEDIC PRESCRIPTION FOR THE PARTICULAR PATIENT. INSTRUCTION INCLUDES GENERAL WORKSHOP PROCEDURES, WOODWORK, LEATHER, METAL AND PLASTIC WORK, PLASTERS, ASSEMBLY OF COMPONENTS, ASSEMBLY OF ORTHOTIC APPLIANCES AND PERFORMANCES AS AN AID TO THE ORTHOTIST.

THE 'PROSTHETICS TECHNICIAN' PROGRAM PREPARES INDIVIDUALS TO MAKE AND REPAIR ARTIFICIAL LIMBS AND OTHER ORTHOPEDIC APPLIANCES IN COMPLIANCE WITH A PHYSICIAN'S PRESCRIPTION. HOW TO CUT, FASHION AND FIT PARTS FROM METAL, PLASTIC, PLASTER, WOOD AND LEATHER IS INCLUDED IN THE INSTRUCTION.

THE 'PROSTHETICS PRACTITIONER' PROGRAM PREPARES INDIVIDUALS TO FORMULATE PRESCRIPTIONS FOR PROSTHESES UNDER THE SUPERVISION OF A PHYSICIAN. INSTRUCTION INCLUDES THE FORMULATION OF PRESCRIPTIONS BASED ON THE EXAMINATION AND EVALUATION OF A PATIENT'S PROSTHETIC NEEDS AS THEY RELATE TO DISEASE AND FUNCTIONAL LOSSES.

THE 'ORTHOTICS PRACTITIONER' PROGRAM PREPARES INDIVIDUALS TO BE HEALTH CARE PRACTITIONERS WHO CARE FOR PATIENTS WITH DISABLING CONDITIONS OF THE LIMBS AND SPINE BY DESIGNING, FABRICATING AND FITTING DEVICES KNOWN AS ORTHOSES. AT THE REQUEST OF, AND IN CONSULTATION WITH THE PHYSICIAN, THE ORTHOTIST ASSISTS IN THE FORMULATING OF PRESCRIPTIONS FOR THE ORTHOSES AND EXAMINES AND EVALUATES THE PATIENT'S ORTHOTIC NEEDS IN RELATION TO THEIR DISEASE ENTITY AND FUNCTIONAL LOSS. INSTRUCTION INCLUDES BASIC DESIGN PRINCIPLES, AND FITTING SKILLS IN LOWER EXTREMITY, UPPER EXTREMITY, AND SPINAL ORTHOTICS.

--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED TO STUDENTS WHO COMPLETE THE ORTHOTICS AND PROSTHETICS TECHNICIAN PROGRAMS. DIPLOMAS ARE GRANTED FOR COMPLETION OF THE ORTHOTIC AND PROSTHETIC PRACTITIONER PROGRAMS.

--- LENGTH OF PROGRAM: ORTHOTICS TECHNICIAN AND PROSTHETICS TECHNICIAN ARE 12 MONTH PROGRAMS. ORTHOTIC AND PROSTHETIC PRACTITIONER PROGRAMS ARE SIX MONTHS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$480 FOR ORTHOTICS TECHNICIAN, \$480 FOR PROSTHETIC TECHNICIAN, \$1530 FOR PROSTHETIC PRACTITIONER and \$1800 FOR ORTHOTIC PRACTITIONER FOR BOOKS, SUPPLIES AND EQUIPMENT.

- - - - - 27147 VERMILLION COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'OCCUPATIONAL THERAPY ASSISTANT' PROGRAM TRAINS STUDENTS FOR CAREERS IN THE FIELD. STUDENTS COMPLETE 45 CREDITS FROM RECOMMENDED CURRICULUM AT VERMILLION. THEY THEN COMPLETE THE COURSE CURRICULUM AT DULUTH AVTI.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS TWO YEARS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE BOOKS AND MATERIALS.

- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: STUDENTS IN THE 'OCCUPATIONAL THERAPY ASSISTANT' PROGRAM STUDY CONCURRENTLY AT ANOKA-RAMSEY AND ANOKA AVTI. THE PROGRAM PREPARES A PERSON TO BECOME A CERTIFIED OCCUPATIONAL THERAPY ASSISTANT AFTER GRADUATION. GENERAL EDUCATION COURSES ARE TAKEN AT ANOKA-RAMSEY AND TECHNICAL COURSES ARE COMPLETED AT ANOKA AVTI. STUDENTS ALSO COMPLETE TWO PRACTICUMS AND TWO FOUR WEEK FIELD EXPERIENCES.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED. GRADUATES MAY ALSO BE CERTIFIED BY THE AMERICAN OCCUPATIONAL THERAPY ASSOCIATION.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 83004 SAINT MARY'S JUNIOR COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'OCCUPATIONAL THERAPY ASSISTANT' PROGRAM PREPARES STUDENTS TO WORK UNDER THE SUPERVISION OF REGISTERED OCCUPATIONAL THERAPISTS. STUDENTS RECEIVE INSTRUCTION IN BASIC CONCEPTS, INTERPERSONAL SKILLS, GROUP DYNAMICS, GROUP LEADERSHIP SKILLS AND ACTIVITY TECHNIQUES. ALL STUDENTS PARTICIPATE IN SUPERVISED FIELD WORK. GENERAL EDUCATION COURSES ARE ALSO REQUIRED. THE 'PHYSICAL THERAPIST ASSISTANT' PROGRAM PREPARES STUDENTS TO ASSIST PHYSICAL THERAPISTS IN THE TREATMENT OF PATIENTS. THROUGH CLASSROOM, LABORATORY, AND CLINICAL EXPERIENCES, STUDENTS LEARN THE THEORIES AND TECHNICAL SKILLS NECESSARY FOR TREATMENT. IN ADDITION TO THE PHYSICAL THERAPY COURSES, WORK IS ALSO REQUIRED IN PATHOLOGY, ETHICAL PROBLEMS, PSYCHOLOGY, MEDICAL TERMINOLOGY, AND GENERAL EDUCATION SUBJECTS.

--- DEGREES OFFERED: GRADUATES RECEIVE AN ASSOCIATE OF APPLIED SCIENCE DEGREE. GRADUATES OF THE OCCUPATIONAL THERAPY ASSISTANT PROGRAM ARE ELIGIBLE TO TAKE THE EXAM TO BECOME CERTIFIED OCCUPATIONAL THERAPY ASSISTANTS.

--- LENGTH OF PROGRAM: THESE ARE SIX QUARTER PROGRAMS.

367 REHABILITATION SERVICES TRANSFER PROGRAMS:

- - - - - 26070 BEMIDJI STATE UNIVERSITY
- - - - - 26073 ST. CLOUD STATE UNIVERSITY
- - - - - 26175 SOUTHWEST STATE UNIVERSITY
- - - - - 27140 BRAINERD COMMUNITY COLLEGE
- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27144 ITASCA COMMUNITY COLLEGE
- - - - - 27145 WILLMAR COMMUNITY COLLEGE
- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE
- - - - - 27148 ROCHESTER COMMUNITY COLLEGE
- - - - - 27149 NORTHLAND COMMUNITY COLLEGE
- - - - - 27150 MESABI COMMUNITY COLLEGE
- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE
- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE
- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE
- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE
- - - - - 27156 NORMANDALE COMMUNITY COLLEGE
- - - - - 81003 UNIVERSITY OF MINNESOTA (MORRIS)

- - - - - 83001 BETHANY LUTHERAN JUNIOR COLLEGE
- - - - - 83002 CROSIER SEMINARY JUNIOR COLLEGE
- - - - - 83003 GOLDEN VALLEY LUTHERAN JUNIOR COLLEGE
- - - - - 83004 ST. MARY'S JUNIOR COLLEGE
- - - - - 84004 CONCORDIA COLLEGE (MOORHEAD)
- - - - - 84013 NORTH CENTRAL BIBLE COLLEGE
- - - - - 84014 NORTHWESTERN COLLEGE
- - - - - 84015 PILLSBURY COLLEGE

371 OPTICAL SERVICES

Programs leading to employment as a dispensing optician are available at community colleges and private vocational schools. Students may participate in two-year programs leading to an associate degree or in one-year (or less) programs leading to a certificate of completion. These programs are designed to teach the skills necessary to adapt and fit corrective eyewear as prescribed by an ophthalmologist or optometrist. State registration is available following the completion of three to five years of work experience in the occupation (see PREP 2614). Some apprenticeships are available.

Community and private colleges also offer programs in optometric technology, which may be pursued as a one-year technical course leading to a certificate of achievement. Students may work as optometric assistants, performing routine vision care under the supervision of optometrists, or they may become optical lab technicians, grinding lenses for vision correction or for industry. Some apprenticeships are also available in this occupation. (See PREP 2614.)

---PROGRAM ADMISSION: Competition is keen for some programs. Backgrounds in science, math, English, and public speaking are helpful in gaining admission to these programs. In some schools, a physical examination is required for acceptance into the programs.

---TYPICAL COURSE WORK: Training includes specialization in office management, filling eyeglass prescriptions, contact lens instruction, and optometric vision therapy. Courses usually include:

Introduction to Business	Fabrication Techniques
Communications	Ophthalmic Lenses
Psychology	Clinical Procedures

Experience working with optometrists supplements lectures and lab work.

---GRADUATION REQUIREMENTS: Requirements vary by program. See school catalogs for additional information.

---THINGS TO KNOW: Graduates of the program may take a state or national board exam as a manufacturing or dispensing optician. Some schools offer review courses for the National Academy of Opticianry Exam.

---RELATED PROGRAM: PROG 369 Optometry.

---DIRECTLY RELATED OCCUPATIONS: DESC 2614 Opticians.

ASSOCIATED OCCUPATIONS: DESC 8115 Optometrists.

CIPS: 17.07
15.0606

SCHOOLS:

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'OPTICAL LENS PRODUCTION' PROGRAM PREPARES INDIVIDUALS TO GRIND LENSES FROM OPTICAL GLASS OR FROM MODERN PLASTIC, ACCORDING TO ENGINEERING SPECIFICATIONS OR OPTOMETRIST PRESCRIPTIONS. INSTRUCTION INCLUDES THE SCIENCE OF OPTICS, OPTICAL GLASS, AND PLASTICS USED IN OPTICS; OPTICAL DESIGN AND DRAWINGS; MACHINERY,

MATERIALS, AND TECHNIQUES REQUIRED FOR PRODUCTION OF OPTICAL LENSES; AND THE POLISHING OF LENSES OR OPTICAL ELEMENTS FOR MOUNTING IN EYEGLASSES OR HOLDING DEVICES.

--- DEGREES OFFERED: A DIPLOMA IN THE OPTICAL LENS PRODUCTION PROGRAM IS OFFERED. THE NATIONAL CERTIFICATION EXAM IS AVAILABLE AFTER GRADUATION. AN OPTIONAL SECOND YEAR IS AVAILABLE AT ARCC FOR OPTICAL GRADUATES FOR A 2-YEAR APPLIED SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THE OPTICAL LENS PRODUCTION PROGRAM IS 10 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$80 FOR BOOKS AND SUPPLIES, \$30 FOR TOOLS, AND A \$25 LAB FEE.

- - - - - 25011 EVELETH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'OPTICAL LENS PRODUCTION' PROGRAM PREPARES INDIVIDUALS TO GRIND LENSES FROM OPTICAL GLASS OR FROM MODERN PLASTIC, ACCORDING TO ENGINEERING SPECIFICATIONS OR OPTOMETRIST PRESCRIPTIONS. INSTRUCTION INCLUDES THE SCIENCE OF OPTICS, OPTICAL GLASS, AND PLASTICS USED IN OPTICS; OPTICAL DESIGN AND DRAWINGS; MACHINERY, MATERIALS, AND TECHNIQUES REQUIRED FOR PRODUCTION OF OPTICAL LENSES; AND THE POLISHING OF LENSES OR OPTICAL ELEMENTS FOR MOUNTING IN EYEGLASSES OR HOLDING DEVICES.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE OPTICAL LENS PRODUCTION PROGRAM IS 19 MONTHS LONG.

- - - - - 25013 GRANITE FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'OPTOMETRIC ASSISTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST AN OPTOMETRIST. INSTRUCTION INCLUDES PERFORMING TESTS TO DETERMINE DEFECTS IN VISION, PREPARING AND FITTING EYEGLASSES OR CONTACT LENSES AND ADMINISTERING CORRECTIVE EYE EXERCISES AND OTHER TREATMENTS WHICH DO NOT REQUIRE MEDICAL TREATMENT, DRUGS OR SURGERY.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION AND A DIPLOMA ARE OFFERED.

--- LENGTH OF PROGRAM: THE OPTOMETRIC ASSISTING PROGRAM IS 10 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$50 FOR BOOKS AND SUPPLIES.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'OPTOMETRIC ASSISTING' PROGRAM PREPARES INDIVIDUALS TO ASSIST AN OPTOMETRIST. INSTRUCTION INCLUDES PERFORMING TESTS TO DETERMINE DEFECTS IN VISION, PREPARING AND FITTING EYEGLASSES OR CONTACT LENSES AND ADMINISTERING CORRECTIVE EYE EXERCISES AND OTHER TREATMENTS WHICH DO NOT REQUIRE MEDICAL TREATMENT, DRUGS OR SURGERY.

--- LENGTH OF PROGRAM: THIS PROGRAM IS NINE MONTHS LONG.

379 ALLIED VETERINARY SERVICES

Programs are available that train students in animal health technology or in veterinary assisting. Animal technicians assist veterinarians, biological research workers and other scientists, and zoological workers. Knowledge of both science and animals is required. Most programs are two years in length, and are offered by community colleges and private vocational schools. Programs lead to associate of arts degrees and/or certificates of completion. Some states require animal technicians to be licensed.

---PROGRAM ADMISSION: Admission is competitive at some schools. Courses in the sciences and experience in working with animals may be helpful in gaining admission to allied veterinary service programs. Some programs admit all students to the first and second semesters and then screen students according to their performance for the second half of the program.

---TYPICAL COURSE WORK: Students in allied veterinary services usually take courses in:

Biology	Mathematics
Chemistry	Economics
Communications	Business Management
Physiology	Parasitology
Nutrition	Animal Care
Microbiology	Lab Procedures
Radiology	Toxicology

Most programs offer practical experience with live animals.

---GRADUATION REQUIREMENTS: Students should be able to handle domestic animals, be familiar with the names and uses of ordinary drugs and with laboratory procedures, and be ready to accept further training and direction from employers regarding specific procedures.

---RELATED PROGRAMS: PROG 224 Animal Grooming and Training, 378 Veterinary Medicine, 112 Animal Sciences.

---ASSOCIATED OCCUPATIONS: DESC 4166 General Farm Hands, 4132 Fish and Game Managers, 8114 Veterinarians.

---REFERENCES:

Minnesota Zoological Society
555 Wabasha
St. Paul, MN 55101

Minnesota Veterinary Medical Association
2353 Rice Street
St. Paul, MN 55113

CIPS: 17.0501
17.0511
17.0512

SCHOOLS:

- - - - - 81005 UNIVERSITY OF MINNESOTA-WASECA TECHNICAL COLLEGE
--- OBJECTIVES OF THE PROGRAM: THE 'ANIMAL HEALTH TECHNOLOGY' PROGRAM TRAINS STUDENTS TO BECOME ANIMAL TECHNICIANS WHO ASSIST VETERINARIANS IN PRACTICE, LABORATORIES, RESEARCH FACILITIES, AND FOOD INSPECTION SERVICES. STUDENTS COMPLETE COURSE WORK IN MEDICAL TERMINOLOGY, HANDLING OF EQUIPMENT AND INSTRUMENTS, X-RAY TECHNIQUES, AND RECORD KEEPING. THEY TAKE NURSING COURSES AND ASSIST IN THE EXAMINATION, TREATMENT, AND SURGERIES ON ANIMALS AT THE SCHOOL.
--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.
--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 82022 MEDICAL INSTITUTE OF MINNESOTA
--- OBJECTIVES OF THE PROGRAM: THE 'VETERINARY TECHNICIAN' PROGRAM PROVIDES TRAINING FOR THOSE STUDENTS WHO WISH TO BECOME VETERINARY TECHNICIANS. COURSE WORK INCLUDES: MEDICAL ASSISTANCE, ANATOMY, PHYSIOLOGY, OFFICE PROCEDURES, CHEMISTRY, ANESTHESIOLOGY AND SURGICAL ASSISTANCE.
--- DEGREES OFFERED: A CERTIFICATE OF GRADUATION IS AWARDED UPON SUCCESSFUL COMPLETION OF THE PROGRAM. AN ASSOCIATE DEGREE IS AVAILABLE FOR THOSE WITH SUFFICIENT COLLEGE CREDIT.
--- LENGTH OF PROGRAM: THE LENGTH OF TRAINING IS 5 QUARTERS (15 MONTHS) IN RESIDENCE PLUS 3 MONTHS OF REQUIRED CLINICAL EXPERIENCE.
--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE UNIFORMS AND BOOKS.

379 ALLIED VETERINARY SERVICES TRANSFER PROGRAMS:
- - - - - 27156 NORMANDALE COMMUNITY COLLEGE

Programs in emergency medical care are designed to teach people the skills needed to provide health care services to persons who need emergency treatment and who are not in a health care facility. These programs are primarily designed to teach pre-hospital, emergency medical skills needed by people who work on ambulances, and by people who work as paramedics during emergencies and disasters. Programs intend to teach emergency treatment of various cardiopulmonary problems, using cardiac resuscitation and emergency equipment; airway, fracture, and hemorrhage management; emergency childbirth; and special care patients exposed to heat, cold, radiation, or a contagious disease. People trained in emergency medical care may be employed by police and fire departments, ambulance companies, and industry.

Some community colleges and universities offer one-year certificate and two-year certificate or associate degree programs in emergency medical technology and paramedical training.

---PROGRAM ADMISSION: Requirements vary. A high school diploma or its equivalent is normally required. Some schools may require related training, education, or experience prior to program admission. See college catalogs for individual program requirements.

---TYPICAL COURSE WORK: Course work varies extensively. Programs usually offer all or some of the following:

Rescue Fundamentals	Anatomy and Physiology
Medical Terminology	Cardiopulmonary Instruction
Medical Law and Ethics	Crisis Intervention

Students may also be required to take classes in subjects such as communications, mathematics, psychology, and business. Instruction is by lecture, class discussion, and hands-on practice and experience, both in hospitals and in actual emergency situations.

---GRADUATION REQUIREMENTS: Requirements vary. See school catalogs for more information.

---THINGS TO KNOW: Many states require that people in emergency medical care occupations be certified by one or more state agencies, such as the Board of Health and the Board of Medical Examiners. Graduates of emergency medical technician paramedic (EMT-P) programs may apply for certification to the National Registry of Emergency Medical Technicians, P.O. Box 29233, Columbus, OH 43229.

---RELATED PROGRAMS: PROG 363 Medicine, 366 Medical Assisting, 353 Nursing.

---DIRECTLY RELATED OCCUPATIONS: DESC 8193 Emergency Medical Technicians.

ASSOCIATED OCCUPATIONS: DESC 8166 Nurse Aides, 8198 Nurse Practitioners, 8164 Licensed Practical Nurses, 8162 Registered Nurses, 8112 Physicians.

---REFERENCES:

Minnesota Department of Health
Emergency Medical Technician
717 Delaware Street S.E.
Minneapolis, MN 55414

CIPS: 18.05
17.0205
17.0206

SCHOOLS:

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'EMERGENCY MEDICAL TECHNICIAN - PARAMEDIC' PROGRAM PREPARES INDIVIDUALS TO USE EQUIPMENT AND MEDICAL MATERIALS FOR DIAGNOSTIC AND THERAPEUTIC PURPOSES BY RENDERING MEDICAL EMERGENCY TREATMENT IN A VARIETY OF SITUATIONS THAT DEMAND IMMEDIATE CARE, SUCH AS HEART ATTACKS, CHILDBIRTH, POISONS, BURNS, AND SHOCK. THE PROGRAM PREPARES EMT-TRAINED INDIVIDUALS TO PROVIDE PRE-HOSPITAL, ADVANCED LIFE SUPPORT MEDICAL CARE TO THE EMERGENCY PATIENT. THROUGH FORMAL COURSEWORK, PRACTICAL INSTRUCTION AND FIELD INTERNSHIP, THE STUDENT IS TRAINED TO RECOGNIZE AND ASSESS MEDICAL EMERGENCIES AS WELL AS TO RENDER ACTUAL CARE SERVICES AT THE SCENE OF AN EMERGENCY. INSTRUCTION INCLUDES INTRAVENOUS CANNULATION, ENDOTRACHEAL INTUBATION, RECOGNITION AND MANAGEMENT OF CARDIAC DYSRHYTHMIAS, AND ADMINISTRATION OF DRUGS AND INTRAVENOUS FLUIDS, UNDER THE DIRECTION OF A PHYSICIAN.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 80 HOURS LONG.

- - - - - 26071 MANKATO STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'EMERGENCY MEDICAL TECHNOLOGY' PROGRAM PREPARES STUDENTS WHO WISH TO ENTER THE EMERGENCY MEDICAL FIELD AS PROFESSIONALS. THE PARAMEDIC IN THIS FIELD IS TRAINED TO FUNCTION IN MOBILE LIFE SUPPORT UNITS AND IN THE EMERGENCY ROOM PHASE OF EMERGENCY CARE.

--- DEGREES OFFERED: AN ASSOCIATE OF SCIENCE DEGREE IN EMERGENCY MEDICAL TECHNOLOGY IS OFFERED.

Medical laboratory programs involve the study of human blood, tissues, and fluid, using clinical laboratory instruments. There are three types of medical laboratory programs: medical laboratory technology, medical laboratory technician-associate, and medical laboratory-certificate (also called medical laboratory assistant). Medical laboratory technology programs intend to prepare students to perform and analyze complex laboratory tests, to research and develop laboratory techniques, and to supervise medical laboratory technicians.

Medical laboratory technology programs consist of three years of pre-technical college course work followed by one year of clinical laboratory experience. Pre-technical course work is offered at colleges and universities. The clinical experience is conducted at hospitals. Some hospital programs are affiliated with a college which awards a bachelor's degree after three years of pre-technical course work and one year of clinical experience. Other hospital programs are not affiliated with a specific college. These programs usually require a bachelor's degree for program entry. Master's and doctoral degree programs are offered in specialty areas within medical laboratory technologies.

Medical laboratory technician-associate programs intend to prepare students to perform supervised clinical laboratory testing and to report the results of routine procedures. These are two-year associate degree programs offered at two- and four-year colleges, private and public vocational schools, and hospital schools.

Medical laboratory technician-certificate programs are designed to train students to assist medical laboratory staff with routine laboratory tests. These one-year certificate programs are offered at hospitals, community colleges, and private and public vocational schools.

Some states require medical laboratory technologists and technicians-associate to be licensed. (See PREP 2644 and 2652.)

---PROGRAM ADMISSION: Applicants should have a background in chemistry, biology, and math in order to enter college programs for medical technology. Applicants to the one-year hospital clinical experience need a bachelor's degree which includes specific course work in biological sciences, math, and chemistry. Undergraduate students should meet with an advisor during their first year to set up an appropriate undergraduate curriculum.

For most schools, completing the three-year pre-technical college course work does not guarantee admission into the clinical program. Enrollment in these programs is limited and competitive. Contact the schools for information on letters of recommendation, deadlines, and other admissions requirements.

A high school diploma or its equivalent is required for admission into medical laboratory technician associate and certificate degree programs. A background in chemistry, biology, and math is also important for entry to some schools.

---TYPICAL COURSE WORK: Medical laboratory technologists must earn credits in the following courses. Instruction methods include lecture and laboratory work.

Biological Sciences	Math
Immunology	Microbiology
Organic or Biochemistry	

Additional recommended courses include:

Lab Procedures	Biomedical Instruction
Genetics	Quantitative Analysis
Physics	Human Physiology

Other courses in the first three years include general bachelor's degree requirements. Course work in the year of clinical education occurs in a hospital setting. Clinical education consists of applying the college education through extensive laboratory experience.

The course work for medical laboratory technicians associate and certificate programs varies due to the different length of the two programs. However, both programs include the following core courses:

Basic Principles of	Medical Terminology
Clinical Laboratory	Laboratory Procedures
Hematology	Parasitology
Sereology	Chemistry

---GRADUATION REQUIREMENTS: All medical laboratory programs require students to have laboratory experience, usually in a hospital setting.

---THINGS TO KNOW: Important factors to consider when choosing a school are: school accreditation, the number of graduates who get jobs, costs, instruction facilities, and faculty qualifications.

---RELATED PROGRAMS: PROG 531 Life Sciences, 524 Chemistry, 366 Medical Assisting, 387 Other Health Technologies, 363 Medicine.

---DIRECTLY RELATED OCCUPATIONS: DESC 2652 Medical Technologists, 2644 Medical Laboratory Technicians.

ASSOCIATED OCCUPATIONS: DESC 8195 Medical Assistants, 8112 Physicians.

---REFERENCES: For a list of accredited medical laboratory programs, approved by the American Medical Association, write:

Dept. of Allied Health Education and Accreditation
American Medical Association
535 N. Dearborn St.
Chicago, IL 60610

For a list of training programs accredited by the Accrediting Bureau of Health Education School, write:

ABHES - Secretary
29089 US 20 West
Elkhart, IN 46514

For Information Contact:

American Medical Technologists
710 Higgins Road
Park Ridge, Illinois 60068

Credentialing Commission
International Society for
Clinical Laboratory Technology
Suite 918
818 Olive Street
St. Louis, Missouri 63101

American Society of Clinical Pathologists
Board of Registry
P.O. Box 12270
Chicago, Illinois 60612

CIPS: 17.03
18.09
18.22

SCHOOLS:

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL LABORATORY TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PERFORMING LAB TESTS UNDER THE SUPERVISION OF MEDICAL TECHNOLOGISTS AND PATHOLOGISTS. INSTRUCTION INCLUDES BACTERIOLOGICAL, BIOLOGICAL AND CHEMICAL TESTS TO PROVIDE DATA ON TREATMENT OF DISEASE.
--- DEGREES OFFERED: AN ASSOCIATE DEGREE IN MEDICAL LABORATORY IS OFFERED.
--- LENGTH OF PROGRAM: THE MEDICAL LABORATORY TECHNOLOGY PROGRAM IS 20 MONTHS LONG.
--- SPECIAL COSTS: THE COST FOR TWO YEARS FOR BOOKS, SUPPLIES, MATERIALS AND UNIFORMS IS \$200.

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL LABORATORY TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PERFORMING LAB TESTS UNDER THE SUPERVISION OF MEDICAL TECHNOLOGISTS AND PATHOLOGISTS. INSTRUCTION INCLUDES BACTERIOLOGICAL, BIOLOGICAL AND CHEMICAL TESTS TO PROVIDE DATA ON TREATMENT OF DISEASE.
--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED UPON SATISFACTORY COMPLETION OF COMPETENCY UNITS AVERAGING 50 WEEKS IN LENGTH. NEW CLASSES BEGIN EACH SPRING AND FALL WHEN PRECEDING CLASSES LEAVE ON CLINICAL ASSIGNMENTS.
--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$400 FOR BOOKS, SUPPLIES, EQUIPMENT AND OFF-CAMPUS EXPENSES.

- - - - - 25012 FARIBAULT AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL LABORATORY TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PERFORMING LAB TESTS UNDER THE SUPERVISION OF MEDICAL TECHNOLOGISTS AND PATHOLOGISTS. INSTRUCTION INCLUDES BACTERIOLOGICAL, BIOLOGICAL AND CHEMICAL TESTS TO PROVIDE DATA ON TREATMENT OF DISEASE.
--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED.
--- LENGTH OF PROGRAM: THIS PROGRAM IS 22 MONTHS LONG.
--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS AND SUPPLIES.

- - - - - 25014 HIBBING AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL LABORATORY TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PERFORMING LAB TESTS UNDER THE SUPERVISION OF MEDICAL TECHNOLOGISTS AND PATHOLOGISTS. INSTRUCTION INCLUDES BACTERIOLOGICAL, BIOLOGICAL AND CHEMICAL TESTS TO PROVIDE DATA ON TREATMENT OF DISEASE.
--- DEGREES OFFERED: AN ASSOCIATE DEGREE FROM A COMMUNITY COLLEGE OR HIBBING A.V.T.I. IS OFFERED.

--- LENGTH OF PROGRAM: THE ASSOCIATE PROGRAM IS 2 YEARS LONG, OF WHICH THE FIRST 2 QUARTERS ARE SPENT AT A COMMUNITY COLLEGE AND THE SECOND AT HIBBING AVTI.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL LABORATORY TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PERFORMING LAB TESTS UNDER THE SUPERVISION OF MEDICAL TECHNOLOGISTS AND PATHOLOGISTS. INSTRUCTION INCLUDES BACTERIOLOGICAL, BIOLOGICAL AND CHEMICAL TESTS TO PROVIDE DATA ON TREATMENT OF DISEASE.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG AND STARTS IN SEPTEMBER.

- - - - - 25032 EAST GRAND FORKS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL LABORATORY TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO ASSIST IN PERFORMING LAB TESTS UNDER THE SUPERVISION OF MEDICAL TECHNOLOGISTS AND PATHOLOGISTS. INSTRUCTION INCLUDES BACTERIOLOGICAL, BIOLOGICAL AND CHEMICAL TESTS TO PROVIDE DATA ON TREATMENT OF DISEASE.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE MEDICAL LABORATORY PROGRAM IS 12 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS, SUPPLIES AND EQUIPMENT.

- - - - - 26071 MANKATO STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: A BACHELOR OF SCIENCE MAJOR IN 'MEDICAL TECHNOLOGY' CONSISTS OF 192 CREDITS AND IS DESIGNED TO PREPARE THE STUDENT FOR REGISTRATION AS A PROFESSIONAL MEDICAL TECHNOLOGIST. USUALLY THE STUDENT SPENDS THE FIRST 3 YEARS OF STUDY ON CAMPUS COMPLETING REQUIRED CHEMISTRY, BIOLOGY, GENERAL EDUCATION, MATH AND PHYSICS CREDITS AND THEN TRANSFERS TO AN APPROVED HOSPITAL SCHOOL OF MEDICAL TECHNOLOGY. AN ASSOCIATE PROGRAM IS ALSO AVAILABLE.

--- DEGREES OFFERED: THE MEDICAL TECHNOLOGY PROGRAM OFFERS A BACHELOR OF SCIENCE DEGREE AND AN ASSOCIATE DEGREE.

- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL LABORATORY TECHNICIAN' PROGRAM IS A COOPERATIVE PROGRAM BETWEEN THE COLLEGE AND THE LAKE REGION HOSPITAL. IT TRAINS STUDENTS FOR EMPLOYMENT IN DOCTORS' OFFICES, CLINICS, AND HOSPITAL LABORATORIES, UNDER THE SUPERVISION OF PERSONNEL WHO HAVE COMPLETED FOUR YEAR PROGRAMS IN MEDICAL TECHNOLOGY. STUDENTS PARTICIPATE IN CLASSROOM EDUCATION PLUS CLINICAL TRAINING AT THE HOSPITAL.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS TWO YEARS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$40 FOR SECOND YEAR UNIFORMS AND SECOND YEAR REGISTRY EXAM FEE.

- - - - - 27143 HIBBING COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL LABORATORY TECHNICIAN' PROGRAM IS DESIGNED FOR STUDENTS WHO HAVE COMPLETED THE ONE YEAR MEDICAL LABORATORY ASSISTANT PROGRAM AT THE HIBBING AREA VOCATIONAL TECHNICAL INSTITUTE. GRADUATES ARE ELIGIBLE TO WRITE THE LICENSURE EXAMINATION TO BECOME MEDICAL

LABORATORY TECHNICIANS.

- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.
- LENGTH OF PROGRAM: THE MEDICAL LABORATORY TECHNICIAN PROGRAM REQUIRES 48 CREDITS IN ADDITION TO THE 1 YEAR REQUIREMENT OF VO-TECH TRAINING DESCRIBED ABOVE. THE OTHER PROGRAMS ARE ALL 2 YEARS LONG.
- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE

- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL LABORATORY TECHNICIAN' PROGRAM TRAINS STUDENTS TO PERFORM THE ROUTINE ANALYSIS OF PATIENT SPECIMENS IN A HEALTH FACILITY. THE PROGRAM IS OFFERED COOPERATIVELY WITH LAKE LAND MEDICAL-DENTAL ACADEMY. STUDENTS COMPLETE TECHNICAL COURSES AT LAKE LAND AND GENERAL EDUCATION COURSES AT MINNEAPOLIS COMMUNITY COLLEGE.
- DEGREES OFFERED: STUDENTS MAY EARN AN ASSOCIATE DEGREE PLUS A CERTIFICATE.
- LENGTH OF PROGRAM: THE PROGRAM IS 2 YEARS LONG.

- - - - - 81037 LAKE LAND MEDICAL-DENTAL ACADEMY

- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL LABORATORY TECHNICIAN TRAINING' PROGRAM PREPARES STUDENTS FOR ENTRY-LEVEL POSITIONS AS LABORATORY TECHNICIANS IN A HOSPITAL LABORATORY OR PHYSICIAN'S OFFICE OR CLINIC. COURSE WORK INCLUDES: ANATOMY AND PHYSIOLOGY, TERMINOLOGY, CLINICAL CHEMISTRY, ELECTROCARDIOGRAPHY, FIRST AID/CPR, GENERAL CHEMISTRY, HEMATOLOGY, IMMUNOHEMATOLOGY/ SEROLOGY, AND URINALYSIS. AN INTERNSHIP OF 3 MONTHS IN A CLINIC OR HOSPITAL MUST BE SUCCESSFULLY COMPLETED BEFORE GRADUATION. THIS PROGRAM IS APPROVED BY THE AMERICAN MEDICAL ASSOCIATION. BECAUSE THIS IS AN AMA ACCREDITED PROGRAM, GRADUATES ARE QUALIFIED TO TAKE THE CLINICAL LABORATORY TECHNICIAN EXAMINATION OFFERED BY THE NATIONAL CERTIFICATION AGENCY FOR MEDICAL LABORATORY PERSONNEL. WITH THE ADDITION OF 45 COLLEGE QUARTER CREDITS OR AN ASSOCIATE OF ARTS DEGREE, THE EXAM FOR MEDICAL LABORATORY TECHNICIAN MAY BE TAKEN. IF THEY PASS THESE EXAMS, STUDENTS MAY USE THE LETTERS CLT(NCAML P) OR MLT(ASCP) AFTER THEIR NAMES.
- DEGREES OFFERED: A DIPLOMA IS AWARDED AFTER SUCCESSFUL COMPLETION OF THE INTERNSHIP.
- LENGTH OF PROGRAM: THE PROGRAM IS 1 YEAR LONG. REDUCED INDIVIDUAL SCHEDULES ARE AVAILABLE FOR STUDENTS WHO WISH TO ATTEND SCHOOL ON A PART-TIME BASIS, THUS TAKING A REDUCED NUMBER OF HOURS PER WEEK FOR A LONGER PERIOD OF TIME.
- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE EXPENDABLE SUPPLIES, LAB BREAKAGE FEE, BOOK RENTAL, AND UNIFORMS AND SHOES.

- - - - - 82022 MEDICAL INSTITUTE OF MINNESOTA

- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL LABORATORY TECHNICIAN' PROGRAM TRAINS STUDENTS FOR WORK IN HOSPITAL LABORATORIES, CLINICS OR RESEARCH LABS. COURSES INCLUDE: CHEMISTRY, ANATOMY/ PHYSIOLOGY, HEMATOLOGY, URINALYSIS, IMMUNO-HEMATOLOGY, AND MICROBIOLOGY.
- DEGREES OFFERED: A CERTIFICATE OF GRADUATION IS AWARDED UPON SUCCESSFUL COMPLETION OF THE PROGRAM. AN ASSOCIATE DEGREE IS AVAILABLE FOR THOSE WITH SUFFICIENT COLLEGE CREDIT.
- LENGTH OF PROGRAM: THE PROGRAM REQUIRES 4 QUARTERS IN RESIDENCE (12

MONTHS) AND UP TO 6 MONTHS IN CLINICAL EXPERIENCE.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE UNIFORMS AND BOOKS.

- - - - - 83004 SAINT MARY'S JUNIOR COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'MEDICAL LABORATORY TECHNICIAN' PROGRAM PREPARES STUDENTS TO PERFORM LABORATORY TESTS UNDER THE SUPERVISION OF A PHYSICIAN OR MEDICAL TECHNOLOGIST. MUCH OF THE PROGRAM WORK IS DONE IN THE SCHOOL LABORATORY AND HOSPITAL CLINICALS, BUT STUDENTS ALSO COMPLETE CLASSROOM WORK IN CHEMISTRY, MICROBIOLOGY, ETHICAL PROBLEMS, MEDICAL TERMINOLOGY, AND MEDICAL LABORATORY THEORY. GENERAL EDUCATION COURSES ARE ALSO REQUIRED.

--- DEGREES OFFERED: GRADUATES RECEIVE THE ASSOCIATE OF APPLIED SCIENCE DEGREE AND ARE ELIGIBLE FOR THE A.S.C.P. EXAM FOR MEDICAL LABORATORY TECHNICIANS.

--- LENGTH OF PROGRAM: THIS IS A 6 QUARTER PROGRAM.

- - - - - 85013 MAYO SCHOOL OF HEALTH RELATED SCIENCES

--- OBJECTIVES OF THE PROGRAM: PROGRAMS OFFERED ARE 'RADIATION THERAPY', 'RADIOGRAPHY' AND 'CYTOTECHNOLOGY'. THE 'RADIATION THERAPY TECHNOLOGY' PROGRAM COMBINES SUPERVISED CLINICAL EXPERIENCE AND CLASSROOM WORK TO PROVIDE TRAINING APPROPRIATE FOR A RADIATION THERAPY TECHNOLOGIST. ON COMPLETION, STUDENTS ARE ELIGIBLE TO WRITE THE EXAMINATION FOR CERTIFICATION BY THE AMERICAN REGISTRY FOR RADIOLOGIC TECHNOLOGISTS. THE 'RADIOGRAPHY' PROGRAM TRAINS STUDENTS IN THE USE OF IONIZING RADIATION (X-RAYS) IN THE DIAGNOSIS OF DISEASE. THE GOAL OF THE PROGRAM IS TO TRAIN HIGHLY SKILLED HEALTH CARE PROFESSIONALS IN THE USE OF X-RAY AND OTHER IMAGING EQUIPMENT IN THE PRODUCTION OF DIAGNOSTIC IMAGES. THE 'CYTOTECHNOLOGY' PROGRAM PROVIDES CLASSROOM WORK AND PRACTICAL TRAINING IN ALL ASPECTS OF CYTOLOGY. GRADUATES ARE ELIGIBLE TO WRITE THE AMERICAN SOCIETY OF CLINICAL PATHOLOGY CERTIFICATION EXAMINATION.

--- DEGREES OFFERED: AN ASSOCIATE OF ARTS DEGREE IS OFFERED FROM ROCHESTER COMMUNITY COLLEGE FOR THE RADIOGRAPHY PROGRAM. CERTIFICATES ARE OFFERED FROM THE MAYO SCHOOL OF HEALTH RELATED SCIENCES FOR THE CYTOTECHNOLOGY, RADIATION THERAPY AND RADIOGRAPHY PROGRAMS.

--- LENGTH OF PROGRAM: THE RADIOGRAPHY PROGRAM IS 24 MONTHS LONG. THE CYTOTECHNOLOGY AND RADIATION THERAPY PROGRAMS ARE FOR A 12 MONTH PERIOD.

Radiologic technology programs intend to train people to operate X-ray equipment and to expose and process medical X-ray film. Training may be offered at community colleges, universities, or medical schools. Programs vary from two-year associate degree programs to three- and four-year certificate and bachelor's degree programs. Graduate studies are also offered in this field. Also available are radiation therapy programs which are designed to train people to treat cancer patients with high energy X-rays and gamma rays. Most programs require a clinical internship at an approved hospital in order to graduate. To practice as a radiologic technologist, a person must complete an accredited program and an internship as well as pass a certification examination given by the American Registry of Radiologic Technologists. (See PREP 8192.)

---PROGRAM ADMISSION: A high school diploma or its equivalent is necessary for admission to a radiologic technology program. Courses in physics, chemistry, biology, and algebra are strongly recommended. Basic knowledge of computers is also helpful. Studies show it is important for radiologic technology students to have good reading skills. Enrollment in radiologic technology programs is often limited. Applicants should contact the school they plan to attend in October or November to find out about admission deadlines.

---TYPICAL COURSE WORK: Subjects are taught through a combination of lectures and clinical (practical) experience. Most programs in radiologic technology include the following core subjects:

Introduction to Radiography	Radiologic Positioning
Human Anatomy and Physiology	Radiation Protection.
Principles of Exposure	Film and Processing
Medical Terminology	Ethics
Radiation Biology	Patient Care
Radiation Physics	

---GRADUATION REQUIREMENTS: Requirements vary with school and length of program. See school catalogs for more information.

---THINGS TO KNOW: A person must graduate from an accredited program in order to take the National Certifying Exam. Radiologic technology programs are full time. Many radiologic technology schools discourage their students from having part time jobs while in the program. With the nationwide increase in older students, a few schools are offering part-time radiologic technology programs. One measure of the success of radiologic technology schools is the success of their graduates in passing National Certifying Exams. Applicants should also check to see if the school they are considering is accredited by a National Certifying Association.

---RELATED PROGRAMS: PROG 366 Medical Assisting, 358 Allied Dental Services, 383 Medical Laboratory Technologies, 387 Other Health Technologies.

---DIRECTLY RELATED OCCUPATIONS: DESC 8192 Radiologic Technologists.

ASSOCIATED OCCUPATIONS: DESC 8188 Health Technicians, 2644 Medical Laboratory Workers, 8169 Respiratory Therapists.

---REFERENCES:

American Registry of Radiologic Technologists
2600 Wayzata Boulevard
Minneapolis, MN 55405

CIPS: 17.0207
17.0208
17.0209

SCHOOLS:

- - - - - 27145 WILLMAR COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'RADIOLOGIC TECHNOLOGY' PROGRAM PREPARES THE STUDENT FOR THE RESPONSIBILITIES AND DUTIES OF A STAFF LEVEL RADIOLOGIC TECHNOLOGIST. THIS PROGRAM COMBINES COURSE WORK AND ON-SITE TRAINING AT THE SCHOOL OF RADIOLOGIC TECHNOLOGY AT RICE MEMORIAL HOSPITAL AND COURSE WORK AT WILLMAR COMMUNITY COLLEGE. THIS PROGRAM IS ADMINISTERED AND OPERATED BY THE SCHOOL OF RADIOLOGIC TECHNOLOGY OF RICE MEMORIAL HOSPITAL. APPLICATIONS TO THE PROGRAM SHOULD BE MADE TO RICE HOSPITAL. THE PROGRAM IS LIMITED TO SIX STUDENTS EACH YEAR.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED WITH ADDITIONAL STUDY.

--- LENGTH OF PROGRAM: THE RADIOLOGIC TECHNOLOGY PROGRAM IS A TWO YEAR PROGRAM.

- - - - - 27148 ROCHESTER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'RADIOGRAPHY' PROGRAM IS AFFILIATED WITH THE MAYO SCHOOL OF HEALTH RELATED SCIENCES. STUDENTS STUDY THE FIRST YEAR AT RCC IN BASIC SCIENCES AND RELATED COURSES. THE SECOND YEAR IS SPENT IN CLINICAL STUDIES AT THE MAYO CLINIC. UPON GRADUATION, STUDENTS ARE ELIGIBLE TO WRITE THE NATIONAL CERTIFICATION EXAMINATION ADMINISTERED BY THE AMERICAN REGISTRY OF RADIOLOGIC TECHNOLOGISTS (ARRT). EMPLOYMENT USUALLY IS IN X-RAY, ULTRASOUND, TOMOGRAPHY OR CATSCAN.

--- DEGREES OFFERED: A COMMUNITY COLLEGE ASSOCIATE OF SCIENCE DEGREE IS OFFERED. A CERTIFICATE OF PROGRAM COMPLETION IS AWARDED FROM THE MAYO SCHOOL OF ALLIED HEALTH SCIENCES.

--- LENGTH OF PROGRAM: THE RADIOGRAPHY PROGRAM IS 24 MONTHS LONG.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'RADIOLOGIC TECHNOLOGY' PROGRAM WILL PRODUCE JOB ENTRY LEVEL PEOPLE FOR THE FOLLOWING OCCUPATIONS: RADIOLOGIC TECHNICIAN IN LICENSED HEALTH CARE FACILITIES (ACUTE HOSPITAL, CONVALESCENT HOSPITAL, LONG TERM CARE FACILITY); IN PHYSICIAN'S OFFICES; IN MEDICAL CLINICS; AND IN PRIVATE INDUSTRY. GRADUATES WILL BE QUALIFIED TO WRITE THE REGISTRY EXAM OF THE AMERICAN REGISTRY OF RADIOLOGIC TECHNOLOGISTS. IT PREPARES A SKILLED HEALTH CARE PROFESSIONAL QUALIFIED TO PROVIDE PATIENT SERVICES USING RADIOGRAPHIC PROCEDURES, UNDER THE DIRECTION OF A PHYSICIAN.

--- DEGREES OFFERED: GRADUATES EARN AN ASSOCIATE DEGREE.

--- LENGTH OF PROGRAM: THIS IS A 24 MONTH PROGRAM.

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: THE 'RADIOLOGIC TECHNOLOGY' PROGRAM, WHICH IS OFFERED THROUGH GENERAL COLLEGE, IS 27 MONTHS LONG. IT PREPARES STUDENTS TO BECOME RADIOLOGIC TECHNOLOGISTS WHO ASSIST RADIOLOGISTS IN EXAMINING X-

RAYs. STUDENTS TAKE COURSES IN GENERAL EDUCATION SUBJECTS, THE SCIENCES, AND THE REQUIRED TECH-NICAL AREAS. THEY ALSO GAIN PRACTICAL CLINICAL EXPERIENCE.

--- DEGREES OFFERED: GRADUATES RECEIVE THE ASSOCIATE IN ARTS DEGREE AND ARE ELIGIBLE FOR CERTIFICATION AND REGISTRATION. MANY STUDENTS DESIGN A THIRD AND FOURTH YEAR BACCALAUREATE PROGRAM IN THE GENERAL COLLEGE IN ORDER TO DEVELOP ADDITIONAL CAREER OPPORTUNITIES.

- - - - - 85013 MAYO SCHOOL OF HEALTH RELATED SCIENCES.

--- OBJECTIVES OF THE PROGRAM: PROGRAMS OFFERED ARE 'RADIATION THERAPY', 'RADIOGRAPHY' AND 'CYTOTECHNOLOGY'. THE RADIATION THERAPY TECHNOLOGY' PROGRAM COMBINES SUPERVISED CLINICAL EXPERIENCE AND CLASSROOM WORK TO PROVIDE TRAINING APPROPRIATE FOR A RADIATION THERAPY TECHNOLOGIST. ON COMPLETION, STUDENTS ARE ELI-GIBLE TO WRITE THE EXAMINATION FOR CERTIFICATION BY THE AMERICAN REGISTRY FOR RADIOLOGIC TECHNOLOGISTS.

THE 'RADIOGRAPHY' PROGRAM TRAINS STUDENTS IN THE USE OF IONIZING RADIATION (X-RAYS) IN THE DIAGNOSIS OF DISEASE. THE GOAL OF THE PROGRAM IS TO TRAIN HIGHLY SKILLED HEALTH CARE PROFESSIONALS IN THE USE OF X-RAY AND OTHER IMAGING EQUIPMENT IN THE PRODUCTION OF DIAGNOSTIC IMAGES.

THE 'CYTOTECHNOLOGY' PROGRAM PROVIDES CLASSROOM WORK AND PRACTICAL TRAINING IN ALL ASPECTS OF CYTOLOGY. GRADUATES ARE ELIGIBLE TO WRITE THE AMERICAN SOCIETY OF CLINICAL PATHOLOGY CERTIFICATION EXAMINATION.

--- DEGREES OFFERED: AN ASSOCIATE OF ARTS DEGREE IS OFFERED FROM ROCHESTER COMMUNITY COLLEGE FOR THE RADIOGRAPHY PROGRAM. CERTIFICATES ARE OFFERED FROM THE MAYO SCHOOL OF HEALTH RELATED SCIENCES FOR THE CYTOTECHNOLOGY, RADIATION THERAPY AND RADIOGRAPHY PROGRAMS.

--- LENGTH OF PROGRAM: THE RADIOGRAPHY PROGRAM IS 24 MONTHS LONG. THE CYTOTECHNOLOGY AND RADIATION THERAPY PROGRAMS ARE FOR A 12 MONTH PERIOD.

- - - - - 90005 ST. MARY'S HOSPITAL - SCHOOL OF RADIOLOGIC TECHNOLOGY - DULUTH

--- OBJECTIVES OF THE PROGRAM: THE 'RADIOLOGIC TECHNOLOGY' PROGRAM DEVELOPS THE BASIC SKILLS NEEDED FOR THE RADIOGRAPHIC AND DIAGNOSTIC PROCEDURES USED IN THE X-RAY PROFESSION. STUDENTS COMPLETING THIS PROGRAM BECOME STAFF TECHNOLOGISTS WITH ADVANCEMENT TO ADMINISTRATIVE ASSISTANT, OR SPECIALIZED AREAS POSSIBLE THROUGH CONTINUED EDUCATION. SUBJECTS INCLUDED IN THE TRAINING ARE PATIENT POSITIONING, PHYSICS, ANATOMY, RADIATION QUALITY, TERMINOLOGY, RADIATION-BIOLOGY, PROTECTION, MEDICAL-SURGICAL DISEASES, FILM CRITIQUES, SPECIAL IMAGING, SPECIAL PROCEDURES, AND EXTENSIVE CLINICAL TRAINING, INCLUDING CT, ULTRA-SOUND AND NUCLEAR MEDICINE

--- DEGREES OFFERED: UPON SATISFACTORY COMPLETION OF THE PROGRAM THE STUDENT WILL RECEIVE A CERTIFICATE OF GRADUATION. THE STUDENT IS THEN ELIGIBLE TO TAKE THE NATIONAL REGISTRY EXAMINATION FOR RADIOLOGIC TECHNOLOGISTS. (ARRT)

--- LENGTH OF PROGRAM: THE PROGRAM IS 2 YEARS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE UNIFORMS, ABOUT \$110.

- - - - - 90014 RICE MEMORIAL HOSPITAL - SCHOOL OF RADIOLOGIC TECHNOLOGY

--- OBJECTIVES OF THE PROGRAM: THE 'RADIOLOGIC TECHNOLOGY' PROGRAM PREPARES THE STUDENT IN THE RESPONSIBILITIES AND DUTIES OF A STAFF LEVEL RADIOLOGIC TECHNOLOGIST. THIS PROGRAM COMBINES CLASSROOM AND CLINICAL TRAINING AT RICE MEMORIAL HOSPITAL WITH CLASSROOM INSTRUCTION AT WILLMAR COMMUNITY COLLEGE.

--- DEGREES OFFERED: A CERTIFICATE IS OFFERED. GRADUATES ARE ELIGIBLE TO TAKE THE AMERICAN REGISTRY EXAMINATION. STUDENTS MAY OBTAIN AN ASSOCIATE OF SCIENCE DEGREE BY COMPLETING AN ADDITIONAL 16 CREDITS AT WILLMAR COMMUNITY COLLEGE.

--- LENGTH OF PROGRAM: THIS IS A 24 MONTH PROGRAM.

- - - - - 90031 ABBOTT-NORTHWESTERN HOSPITAL - SCHOOL OF RADIOLOGIC TECHNOLOGY

--- OBJECTIVES OF THE PROGRAM: THE 'RADIOLOGIC TECHNOLOGY' PROGRAM PREPARES STUDENTS FOR A CAREER AS A RADIOGRAPHER. A RADIOGRAPHER UTILIZES NUMEROUS X-RAY IMAGING SYSTEMS TO ASSIST IN THE DIAGNOSIS OF DISEASES. STUDENTS LEARN HOW TO OPERATE SOPHISTICATED RADIOLOGICAL EQUIPMENT SUCH AS CAT SCANNERS AND DIGITAL X-RAY UNITS.

--- DEGREES OFFERED: GRADUATES OF THIS PROGRAM ARE AWARDED A CERTIFICATE AND ARE ELIGIBLE TO TAKE THE NATIONAL CERTIFICATION EXAMINATION OF THE AMERICAN REGISTRY OF RADIOLOGIC TECHNOLOGISTS.

--- LENGTH OF PROGRAM: THIS IS A 24 MONTH CONTINUOUS PROGRAM.

- - - - - 90034 METHODIST HOSPITAL - SCHOOL OF RADIOLOGIC TECHNOLOGY

--- OBJECTIVES OF THE PROGRAM: THE 'RADIOLOGIC TECHNOLOGY' PROGRAM PREPARES STUDENTS FOR CAREERS AS REGISTERED RADIOLOGIC TECHNOLOGISTS. STUDENTS IN THIS PROGRAM RECEIVE BOTH CLASSROOM AND CLINICAL INSTRUCTION IN RADIOLOGIC TECHNOLOGY AT METHODIST HOSPITAL.

--- DEGREES OFFERED: A CERTIFICATE IS OFFERED. GRADUATES ARE ELIGIBLE TO TAKE THE AMERICAN REGISTRY EXAMINATION FOR RADIOLOGIC TECHNOLOGISTS.

--- LENGTH OF PROGRAM: THIS IS A 24 MONTH CONTINUOUS PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE BOOKS AND UNIFORMS.

- - - - - 90035 VETERANS ADMINISTRATION HOSPITAL SCHOOL OF RADIOLOGIC TECHNOLOGY

--- OBJECTIVES OF THE PROGRAM: THE 'RADIOLOGIC TECHNOLOGY' PROGRAM PREPARES THE STUDENT TO WORK IN ANY HOSPITAL OR CLINIC IN THE UNITED STATES, CANADA AND SOME OVERSEAS COUNTRIES. THE STUDENTS ARE ALSO PREPARED TO TAKE THE NATIONAL ARRT EXAM AFTER GRADUATION.

--- DEGREES OFFERED: GRADUATES RECEIVE CERTIFICATES OF TRAINING AND MAY TRANSFER 45 COLLEGE CREDITS TOWARD A DEGREE.

--- LENGTH OF PROGRAM: THIS PROGRAM REQUIRES 2 YEARS (24 CONSECUTIVE MONTHS) OF STUDY. THE PROGRAM BEGINS ON JULY 1 AND ENDS ON JUNE 30.

--- SPECIAL COSTS: THERE IS NO TUITION. STUDENTS ARE RESPONSIBLE FOR THEIR OWN LIVING EXPENSES AND BOOKS. UNIFORMS ARE PROVIDED BY HOSPITAL. WHITE SHOES MUST BE PURCHASED BY STUDENT.

- - - - - 90044 NORTH MEMORIAL MEDICAL CENTER - SCHOOL OF X-RAY TECHNIQUE

--- OBJECTIVES OF THE PROGRAM: THE 'X-RAY TECHNIQUE' PROGRAM PREPARES STUDENTS FOR CAREERS AS CERTIFIED RADIOLOGIC TECHNOLOGISTS. IN THIS PROGRAM, STUDENTS RECEIVE 24 MONTHS OF CLASSROOM AND CLINICAL TRAINING AT NORTH MEMORIAL MEDICAL CENTER.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED. GRADUATES ARE QUALIFIED TO TAKE THE NATIONAL REGISTRY EXAMINATION FOR RADIOLOGIC TECHNOLOGISTS.

--- LENGTH OF PROGRAM: THIS IS A 24 MONTH PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE UNIFORMS, HOUSING, TRANSPORTATION AND BOOKS.

- - - - - 90099 ST. CLOUD SCHOOL OF X-RAY TECHNOLOGY

--- OBJECTIVES OF THE PROGRAM: THE 'RADIOGRAPHY' PROGRAM PROVIDES THE

OPPORTUNITY FOR STUDENTS TO GAIN THE KNOWLEDGE, SKILLS, AND UNDERSTANDING APPROPRIATE TO THE PRACTICE OF RADIOGRAPHY. THE SCOPE OF THESE COMPREHENSIONS AND THE DEGREE OF SKILL IN THEIR APPLICATION ARE SUCH THAT INDIVIDUALS ARE ENABLED UPON COMPLETION TO FUNCTION AS STAFF TECHNOLOGISTS IN HOSPITALS AND SIMILAR HEALTH CARE INSTITUTIONS.

--- DEGREES OFFERED: A CERTIFICATE OF GRADUATION IS OFFERED. AFTER GRADUATION THE INDIVIDUAL IS ELIGIBLE TO TAKE THE RADIOGRAPHER REGISTRY EXAMINATION FROM THE AMERICAN REGISTRY OF RADIOLOGIC TECHNOLOGISTS.

--- LENGTH OF PROGRAM: THE PROGRAM IS 24 CONSECUTIVE MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$160 FOR BOOKS, \$100 FOR UNIFORMS, AND \$75 FOR SUPPLIES.

A number of allied health programs intend to prepare technicians or technologists to perform specific tasks as part of a medical team in a hospital or clinic. Respiratory therapy programs involve the study of procedures used to treat patients with respiratory (heart and lung) ailments. Electroencephalographic (EEG) technologist and technician programs prepare students to record the electrical activity of the brain. Surgical technology/operation room technician programs include the study of operating room procedures, safety, and surgical team support.

Program length varies from one-year certificate programs to two- and three-year associate degree programs. Allied health programs are offered at colleges and universities, community colleges, vocational technical centers, medical schools, and hospitals. Several Minnesota community colleges offer programs in respiratory therapy. Private vocational schools in Minnesota offer miscellaneous health technologies including acupuncture and hypnosis.

To practice in allied health occupations, a person must be licensed or pass a national examination. (See PREP 8169 Respiratory Therapists or 8188 Health Technicians.)

---PROGRAM ADMISSION: All allied health technician/technology programs require a high school degree or its equivalent for program admission. Some programs require post-high school education for admission. A background in math and biological and physical sciences is helpful. Some programs have specific science and math course requirements for program entry.

---TYPICAL COURSE WORK: Allied health programs consist of lectures, lab work, and clinical experience. Course work varies among programs, however, most include the following core subjects:

Anatomy	Professional Ethics
Physiology	Personal and Patient Safety
Diseases (as they	Clinical Procedures
relate to a	Instrumentation (of specific
specific field)	field)

---GRADUATION REQUIREMENTS: Graduation requirements vary among programs. See school catalogs for information.

---THINGS TO KNOW: Enrollment in allied health programs is often limited. Apply early in the year.

A wide variety of allied health programs is offered in the military.

---RELATED PROGRAMS: PROG 363 Medicine, 353 Nursing, 381 Emergency Medical Care, 385 Radiologic Technology, 383 Medical Laboratory Technologies, 358 Allied Dental Services.

---DIRECTLY RELATED OCCUPATIONS: DESC 8169 Respiratory Therapists, 8188 Health Technicians.

ASSOCIATED OCCUPATIONS: DESC 8193 Emergency Medical Technicians, 8162 Registered Nurses, 8164 Licensed Practical Nurses, 8198 Nurse Practitioners, 8112 Physicians, 2644 Medical Laboratory Technicians, 8117 Physician Assistants, 8192 Radiologic Technologists.

---REFERENCES: For additional information, including a list of all

accredited allied health programs in the United States, see the 'Allied Health Education Directory,' 8th edition. To order, contact:

American Medical Association Order Dept. - OP-391

P.O. Box 821

Monroe, WI 53566

For Information contact:

Association of Surgical Technologists, Inc.

Caller No. E

Littleton, Colorado 80120

National Commission on Certification of

Physician's Assistants, Inc.

3384 Peach Tree Road N.E.

Suite 560

Atlanta, Georgia 30326

CIPS: 17.0201	17.0299
17.0202	17.0504
17.0203	17.0599
17.0204	17.0818
17.0210	17.0819
17.0211	17.99
17.0212	

SCHOOLS:

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'RESPIRATORY THERAPY TECHNICIAN EDUCATION' PROGRAM PREPARES INDIVIDUALS TO PROVIDE TREATMENT TO PATIENTS WITH RESPIRATORY DISORDERS INCLUDING THOSE WITH SEVERE RESPIRATORY PROBLEMS IN EMERGENCY SITUATIONS AND THOSE REQUIRING INTENSIVE CARE. INSTRUCTION INCLUDES OPERATING, MAINTAINING AND MAKING MINOR REPAIRS OF EQUIPMENT USED IN SUPPORTIVE RESPIRATORY FUNCTIONS, SUCH AS THE ADMINISTRATION OF OXYGEN AND OTHER THERAPEUTIC GASES AND MIST INHALATION AS DIRECTED BY A PHYSICIAN. THE 'SURGICAL TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SERVE AS GENERAL TECHNICAL ASSISTANTS BEFORE, DURING, AND AFTER OPERATIONS UNDER THE SUPERVISION OF A REGISTERED NURSE. INSTRUCTION INCLUDES PRE-OPERATION PATIENT AND SURGICAL TEAM PREPARATION, SUPPLY INVENTORY MAINTENANCE AND STERILIZATION AND CLEANING OF EQUIPMENT AND OPERATING ROOMS.

THE 'ELECTROENCEPHALOGRAPH TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO OPERATE AND MAINTAIN THE ELECTROENCEPHALOGRAPH. INSTRUCTION INCLUDES MEASURING IMPULSE FREQUENCIES AND DIFFERENCES IN ELECTRICAL POTENTIAL BETWEEN THE VARIOUS AREAS OF THE BRAIN TO OBTAIN DATA FOR THE PHYSICIAN TO USE IN DIAGNOSING BRAIN DISORDERS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED IN EACH PROGRAM.

--- LENGTH OF PROGRAM: THE RESPIRATORY THERAPY TECHNICIAN PROGRAM IS 15 MONTHS LONG INCLUDING ONE QUARTER AT ANOKA-RAMSEY COMMUNITY COLLEGE. THE EEG PROGRAM IS 12-18 MONTHS LONG. THE SURGICAL TECHNOLOGY PROGRAM IS 10 MONTHS LONG.

--- SPECIAL COSTS: FOR THE SURGICAL TECHNOLOGY PROGRAM, RELATED COSTS WILL INCLUDE \$350 FOR BOOKS AND SUPPLIES AND A \$50 LAB FEE. FOR THE EEG PROGRAM RELATED COSTS WILL INCLUDE \$350 FOR BOOKS AND SUPPLIES AND A \$20 LAB FEE. COSTS DO NOT INCLUDE COMMUNITY COLLEGE COSTS.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SURGICAL TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SERVE AS GENERAL TECHNICAL ASSISTANTS BEFORE, DURING, AND AFTER OPERATIONS UNDER THE SUPERVISION OF A REGISTERED NURSE. INSTRUCTION INCLUDES PRE-OPERATION PATIENT AND SURGICAL TEAM PREPARATION, SUPPLY INVENTORY MAINTENANCE AND STERILIZATION AND CLEANING OF EQUIPMENT AND OPERATING ROOMS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED TO STUDENTS WHO SUCCESSFULLY COMPLETE THE SURGICAL TECHNOLOGY PROGRAM.

--- LENGTH OF PROGRAM: THIS PROGRAM TAKES 10 MONTHS TO COMPLETE.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SURGICAL TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SERVE AS GENERAL TECHNICAL ASSISTANTS BEFORE, DURING, AND AFTER OPERATIONS UNDER THE SUPERVISION OF A REGISTERED NURSE. INSTRUCTION INCLUDES PRE-OPERATION PATIENT AND SURGICAL TEAM PREPARATION, SUPPLY INVENTORY MAINTENANCE AND STERILIZATION AND CLEANING OF EQUIPMENT AND OPERATING ROOMS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM LASTS 9 MONTHS.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$370 FOR BOOKS AND EQUIPMENT.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'RESPIRATORY THERAPY TECHNICIAN EDUCATION' PROGRAM PREPARES INDIVIDUALS TO PROVIDE TREATMENT TO PATIENTS WITH RESPIRATORY DISORDERS INCLUDING THOSE WITH SEVERE RESPIRATORY PROBLEMS IN EMERGENCY SITUATIONS AND THOSE REQUIRING INTENSIVE CARE. INSTRUCTION INCLUDES OPERATING, MAINTAINING AND MAKING MINOR REPAIRS OF EQUIPMENT USED IN SUPPORTIVE RESPIRATORY FUNCTIONS, SUCH AS THE ADMINISTRATION OF OXYGEN AND OTHER THERAPEUTIC GASES AND MIST INHALATION AS DIRECTED BY A PHYSICIAN.

--- DEGREES OFFERED: A DIPLOMA OR AN ASSOCIATE DEGREE IS AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 11-22 MONTHS LONG.

- - - - - 25032 EAST GRAND FORKS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'SURGICAL TECHNOLOGY' PROGRAM PREPARES INDIVIDUALS TO SERVE AS GENERAL TECHNICAL ASSISTANTS BEFORE, DURING, AND AFTER OPERATIONS UNDER THE SUPERVISION OF A REGISTERED NURSE. INSTRUCTION INCLUDES PRE-OPERATION PATIENT AND SURGICAL TEAM PREPARATION, SUPPLY INVENTORY MAINTENANCE AND STERILIZATION AND CLEANING OF EQUIPMENT AND OPERATING ROOMS.

--- DEGREES OFFERED: DEGREES OF OCCUPATIONAL PROFICIENCY ARE OFFERED.

--- LENGTH OF PROGRAM: THE SURGICAL TECHNOLOGY PROGRAM IS 39 WEEKS LONG.

--- SPECIAL COSTS: COSTS INCLUDE BOOK, SUPPLIES AND EQUIPMENT.

- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'HISTOLOGY TECHNICIAN' PROGRAM IS A COOPERATIVE PROGRAM BETWEEN THE COLLEGE AND THE LAKE REGION HOSPITAL. IT PREPARES STUDENTS FOR EMPLOYMENT IN PATHOLOGY LABORATORIES. STUDENTS PARTICIPATE IN CLASSROOM EDUCATION PLUS HISTOLOGY LABORATORY TRAINING AT THE HOSPITAL.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE HISTOLOGY TECHNICIAN PROGRAM IS 2 YEARS LONG.

- - - - - 27148 ROCHESTER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'RESPIRATORY THERAPY' PROGRAM TRAINS

STUDENTS TO BECOME SPECIALISTS WHO WORK UNDER THE SUPERVISION OF A PHYSICIAN TO ADMINISTER AIDS TO THE BREATHING PROCESS OF THEIR PATIENTS. THEY MUST BE EXPERT IN THE THERAPEUTIC USES OF SUCH AIDS AS MEDICAL GASES, OXYGEN ADMINISTRATION, POSITIVE PRESSURE VENTILATION, CHEST PHYSICAL THERAPY, CARDIO-PULMONARY RESUSCITATION, AND MECHANICAL AIRWAYS. GRADUATES ARE ELIGIBLE TO WRITE THE NATIONAL REGISTRY EXAMINATION FOR RESPIRATORY THERAPISTS ESTABLISHED BY THE JOINT REVIEW COMMITTEE FOR RESPIRATORY THERAPY EDUCATION.

--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE RESPIRATORY THERAPY PROGRAM IS 2 YEARS LONG.

- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'ELECTRO-ENCEPHALOGRAPHIC TECHNOLOGIST (EET)' PROGRAM PREPARES STUDENTS FOR LICENSURE AS EET TECHNOLOGISTS. EET TECHNOLOGISTS RECORD BRAIN ACTIVITY UNDER SUPERVISION IN HOSPITALS, CLINICS AND RESEARCH LABS. THIS PROGRAM REQUIRES CONCURRENT STUDY AT ANOKA AVTI.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE EET PROGRAM IS 18 MONTHS (5 QUARTERS PLUS 1 SUMMER) LONG.

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: NORTH HENNEPIN OFFERS A 'CARDIO-PULMONARY TECHNOLOGY' PROGRAM, A 'RESPIRATORY THERAPY' PROGRAM, AND A 'NON-INVASIVE CARDIOGRAPHY' PROGRAM. THE FIRST TRAINS STUDENTS TO MAINTAIN THE OXYGENATOR AND CIRCULATORY FUNCTIONS OF THE PATIENT'S LUNGS AND HEART DURING OPEN HEART SURGERY. THE SECOND PREPARES STUDENTS AS RESPIRATORY THERAPISTS. THE THIRD PROGRAM TRAINS STUDENTS TO OPERATE EQUIPMENT USED IN TESTING THE HEART WITHOUT USING SURGERY. THESE PROGRAMS ARE OFFERED IN AFFILIATION WITH NORTH MEMORIAL HOSPITAL.

--- DEGREES OFFERED: EACH PROGRAM OFFERS AN ASSOCIATE IN APPLIED SCIENCE DEGREE.

--- LENGTH OF PROGRAM: EACH PROGRAM IS 2 YEARS PLUS 1 SUMMER SESSION LONG.

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: THE 'SPEECH AND HEARING SCIENCE' PROGRAM, WHICH IS OFFERED THROUGH THE COLLEGE OF LIBERAL ARTS AND THROUGH EXTENSION, INCLUDES THE STUDY OF HEARING, SPEECH, AND LANGUAGE. THIS MAY BE A PRE-PROFESSIONAL PROGRAM FOR THOSE WHO WANT TO BECOME SPEECH PATHOLOGISTS OR AUDIOLOGISTS. THE GRADUATE LEVEL 'COMMUNICATION DISORDERS' PROGRAM PREPARES STUDENTS FOR LICENSURE AND ALSO OFFERS DOCTORAL LEVEL OPTIONS IN SPEECH SCIENCE AND HEARING SCIENCE. CONTINUING EDUCATION AND EXTENSION ALSO OFFERS A 2-YEAR CERTIFICATE PROGRAM FOR 'OPHTHALMOLOGY TECHNICIANS'. IT TEACHES STUDENTS SKILLS IN TREATING AND DIAGNOSING EYE DISEASES SO THEY MAY QUALIFY TO WORK UNDER THE SUPERVISION OF AN OPHTHALMOLOGIST.

--- DEGREES OFFERED: STUDENTS MAY EARN THE BACHELOR OF SCIENCE DEGREE IN SPEECH AND HEARING SCIENCE AND THE MASTER OF SCIENCE AND DOCTOR OF PHILOSOPHY DEGREES IN COMMUNICATION DISORDERS. A CERTIFICATE IS OFFERED IN THE OPHTHALMOLOGY TECHNICIAN PROGRAM.

- - - - - 83004 SAINT MARY'S JUNIOR COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'RESPIRATORY THERAPIST' PROGRAM PREPARES STUDENTS TO ASSIST IN TREATING RESPIRATORY AND CIRCULATORY DISORDERS. STUDENTS IN BOTH PROGRAMS COMPLETE GENERAL EDUCATION COURSES AS WELL AS TECHNICAL STUDIES. CLASSROOM AND CLINICAL OR FIELD WORK ARE INCLUDED IN THE CURRICULUM.

--- DEGREES OFFERED: THE PROGRAM OFFERS THE ASSOCIATE OF APPLIED SCIENCE DEGREE. GRADUATES OF THE RESPIRATORY THERAPIST PROGRAM ARE ELIGIBLE TO TAKE THE REGISTRATION EXAM.

--- LENGTH OF PROGRAM: RESPIRATORY THERAPY IS AN 8 QUARTER PROGRAM.

- - - - - 85013 MAYO SCHOOL OF HEALTH RELATED SCIENCES

--- OBJECTIVES OF THE PROGRAM: PROGRAMS OFFERED ARE 'RADIATION THERAPY', 'RADIOGRAPHY' AND 'CYTOTECHNOLOGY'. THE RADIATION THERAPY TECHNOLOGY PROGRAM COMBINES SUPERVISED CLINICAL EXPERIENCE AND CLASSROOM WORK TO PROVIDE TRAINING APPROPRIATE FOR A RADIATION THERAPY TECHNOLOGIST. ON COMPLETION, STUDENTS ARE ELIGIBLE TO WRITE THE EXAMINATION FOR CERTIFICATION BY THE AMERICAN REGISTRY FOR RADIOLOGIC TECHNOLOGISTS. THE RADIOGRAPHY PROGRAM TRAINS STUDENTS IN THE USE OF IONIZING RADIATION (X-RAYS) IN THE DIAGNOSIS OF DISEASE. THE GOAL OF THE PROGRAM IS TO TRAIN HIGHLY SKILLED HEALTH CARE PROFESSIONALS IN THE USE OF X-RAY AND OTHER IMAGING EQUIPMENT IN THE PRODUCTION OF DIAGNOSTIC IMAGES. THE CYTOTECHNOLOGY PROGRAM PROVIDES CLASSROOM WORK AND PRACTICAL TRAINING IN ALL ASPECTS OF CYTOLOGY. GRADUATES ARE ELIGIBLE TO WRITE THE AMERICAN SOCIETY OF CLINICAL PATHOLOGY CERTIFICATION EXAMINATION.

--- DEGREES OFFERED: AN ASSOCIATE OF ARTS DEGREE IS OFFERED FROM ROCHESTER COMMUNITY COLLEGE FOR THE RADIOGRAPHY PROGRAM. CERTIFICATES ARE OFFERED FROM THE MAYO SCHOOL OF HEALTH RELATED SCIENCES FOR THE CYTOTECHNOLOGY, RADIATION THERAPY AND RADIOGRAPHY PROGRAMS.

--- LENGTH OF PROGRAM: THE RADIOGRAPHY PROGRAM IS 24 MONTHS LONG. THE CYTOTECHNOLOGY AND RADIATION THERAPY PROGRAMS ARE 12 MONTHS LONG.

387 OTHER HEALTH TECHNOLOGIES TRANSFER PROGRAMS:

- - - - - 26070 BEMIDJI STATE UNIVERSITY
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE
- - - - - 27157 INVER HILLS COMMUNITY COLLEGE
- - - - - 81004 UNIVERSITY OF MINNESOTA - CROOKSTON TECHNICAL COLLEGE

Programs in home economics intend to prepare individuals for the effective management of family resources, to provide occupational training for people who provide services and goods used by families, or to prepare people for research to discover the changing needs of individuals and families and the means of satisfying those needs. One- and two-year programs offered at community colleges emphasize the development of practical skills used in the home or in jobs related to home economics. Bachelor's degree and graduate programs provide a diverse background of knowledge of the needs of people and families, such as nutrition, family relationships, development of children, housing and clothing needs, and the management of resources. Most programs include options for concentrated study in a specialized area of home economics, preparing individuals for occupations in educational settings, social service agencies, businesses, and research.

---PROGRAM ADMISSION: Admission requirements vary with the program. Recommended courses include math, English, speech, chemistry, social sciences, and art.

---TYPICAL COURSE WORK: In addition to lectures, home economics programs include laboratory experiences and may include field experiences. Core curriculum usually includes:

Foods & Nutrition	Clothing & Textiles
Family & Human Relations	Housing & Home
Consumer Education	Furnishings
Child Development	Home Management

Programs also include courses from other disciplines, such as art, chemistry, biology, business, communications, and social sciences.

---GRADUATION REQUIREMENTS: Requirements vary with the length and type of program. See school catalogs for more detailed information.

---THINGS TO KNOW: Home economics programs, with options in food and nutrition, are often designed to satisfy curriculum requirements established by the American Dietetics Association. These programs prepare people for the internship required for certification as a registered dietitian. Students pursuing a dietetics program should verify that dietetics course requirements are included in the school's curriculum.

---RELATED PROGRAMS: 393 Dietetics, 395 Textiles and Clothing, 397 Child Development and Child Care, 399 Food Service, 161 Hotel and Motel Management, 131 Architecture and Environmental Design (for interior design programs), 565 Social Service, 236 Secondary Education.

---DIRECTLY RELATED OCCUPATIONS: DESC 2366 Interior Designers and Decorators, 4441 Clothes Designers 8116 Dietitians, 8416 Child Care Workers

CIPS: 19. (except 19.0502 through 19.0599 and 19.09)

20.01	20.0506
20.0501	20.0507
20.0502	20.0599
20.0505	20.99

SCHOOLS:

- - - - - 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE HOSPITALITY AND HOME ECONOMICS DIVISION OFFERS AN OPTION IN 'FAMILY SERVICES'. THIS PRO-GRAM EMPHASIZES THE MANAGEMENT OF PERSONAL LIVING AND ACQUAINTS THE STUDENT WITH FAMILY FINANCING, FOOD PRACTICES, CONSUMER MANAGEMENT, RECREATION, FAMILY RELATIONSHIPS, AND OTHER FUNDAMENTALS OF HOUSEHOLD MANAGEMENT. THE 'CHILD CARE AND DEVELOPMENT' PROGRAM IS DESIGNED TO PREPARE STUDENTS TO ASSUME DIRECT RESPONSIBILITY FOR THE DAILY ACTIVITIES OF GROUPS OF YOUNG CHILDREN IN DEVELOPMENTAL PROGRAMS.

THE 'HOME ECONOMICS EDUCATION' CURRICULA IS A PREPROFESSIONAL PROGRAM DESIGNED FOR STUDENTS DESIRING TO ENTER HOME ECONOMICS EDUCATION OR HOME ECONOMICS EXTENSION. STUDENTS COMPLETE TWO YEARS AT UMC AND THEN TRANSFER TO A BACCALAUREATE DEGREE PROGRAM IN HOME ECONOMICS EDUCATION AT THE UNIVERSITY'S ST. PAUL CAMPUS OR ANOTHER COLLEGE OR UNIVERSITY.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED IN EACH PROGRAM.

--- LENGTH OF PROGRAM: THESE ARE 2 YEAR PROGRAMS.

- - - - - 81005 UNIVERSITY OF MINNESOTA-WASECA TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE HOME AND FAMILY SERVICES DIVISION OFFERS MAJORS IN 'CHILD CARE SERVICES', 'FAMILY MERCHANDISING', 'RURAL HOME SERVICES' WITH AN OPTION IN 'SERVICES TO THE RURAL ELDERLY', AND 'RURAL YOUTH AND RECREATION'. THESE PROGRAMS TRAIN AIDES AND TECHNICIANS WHO PROVIDE SERVICES FOR RURAL FAMILIES. STUDENTS TAKE AGRICULTURE AND RELATED EDUCATION COURSES AS WELL AS A PREOCCUPATIONAL PREPARATION UNIT AND COURSES IN THEIR MAJOR. NOTE: NOT NOW ACCEPTING STUDENTS IN RURAL YOUTH AND RECREATION MAJOR.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IN HOME AND FAMILY SERVICES IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

393 DIETETICS

Dietetics is the study of human nutrition and its application in providing for the dietary needs of people. Dietetics programs are designed to prepare individuals for occupations as professional dietitians, dietetic technicians, and dietetic assistants. Community colleges and vocational schools may offer one- or two-year dietetics technology programs, or 90 clock hour dietetic assistant in-service training. Students learn about nutrition and develop skills in menu planning and quantity food preparation for institutional food service. Bachelor's degree and graduate programs are designed to prepare people for professional dietetic careers. At many colleges and universities dietetics is offered as an option in home economics or foods and nutrition programs. A period of clinical experience is required for registration as a Registered Dietitian by The American Dietetic Association. Dietetics programs are often designed to provide the course work required for admission to a six- to twelve-month dietetics internship after completion of the bachelor degree program. A growing number of schools offer coordinated undergraduate programs, allowing students to complete the required clinical experience while obtaining a bachelor's degree. (For further information about registration, see PREP 8116 Dietitians.) Professional dietetics programs provide options for specialized study in areas such as administration, education, research, and clinical and community dietetics.

---PROGRAM ADMISSION: A background in chemistry, biology, and home economics is recommended. Professional dietetics program admission may be limited to students who have successfully completed lower division course work in foods and nutrition.

---TYPICAL COURSE WORK: Students attend lectures on menu planning, meal preparation, and the nutritional value of food. Many hours are spent practicing food preparation skills and organizing large kitchens. Some programs offer on-the-job work experience. Core curriculum usually includes:

Human Nutrition	Physiology
Chemistry	Psychology
Biochemistry	Nutrition and Disease

In addition, students may take management courses covering purchasing, accounting, and the organization and administration of food service.

---GRADUATION REQUIREMENTS: Requirements vary with program. See school catalogs for specific information.

---THINGS TO KNOW: Programs in dietetics must be approved by The American Dietetic Association in order to qualify graduates for internships or registration.

---RELATED PROGRAMS: PROG 391 Home Economics, 399 Food Service.

---DIRECTLY RELATED OCCUPATIONS: DESC 8116 Dietitians

CIPS: 19.05 (except 19.0501)

SCHOOLS:

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'DIETETIC ASSISTANT' PROGRAM PREPARES INDIVIDUALS, UNDER THE DIRECTION OF A PROFESSIONAL DIETITIAN, TO UTILIZE NUTRITIONAL KNOWLEDGE IN PREPARING AND SERVING MEALS TO INDIVIDUALS WITH SPECIFIC DIETARY NEEDS. INSTRUCTION INCLUDES SELECTING AND USING EQUIPMENT, PREPARING AND SERVING FOOD, ASSEMBLING TRAYS FOR CONFORMANCE WITH DIET REGULATION AND NUTRITIONAL VALUES, HANDLING FOODS, OBSERVING SAFETY AND SANITARY STANDARDS, FOLLOWING APPROPRIATE EMERGENCY MEASURES, AND ASSISTING IN THE MANAGEMENT OF DIETARY FACILITIES.

--- DEGREES OFFERED: A DIPLOMA IN A DIETETIC ASSISTANT PROGRAM IS OFFERED.

--- LENGTH OF PROGRAM: THE DIETETIC ASSISTANT PROGRAM IS 12 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$90 FOR BOOKS, SUPPLIES AND EQUIPMENT, AND APPROXIMATELY \$85 FOR 2 UNIFORMS AND SHOES.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'DIETETIC TECHNICIAN' PROGRAM PREPARES INDIVIDUALS TO WORK UNDER THE GUIDANCE OF A REGISTERED DIETITIAN IN A DESIGNATED UNIT OR DEPARTMENT OF A HEALTH CARE, COMMUNITY CARE OF EDUCATIONAL FOOD SERVICE. IT PROVIDES INDIVIDUALS WITH THE KNOWLEDGE, SKILL, AND ATTITUDE NECESSARY TO ASSESS, PLAN, IMPLEMENT, AND EVALUATE FOODSERVICE OPERATIONS. INSTRUCTION INCLUDES SELECTING, PREPARING AND SERVING FOODS, OBSERVING SAFETY AND SANITARY STANDARDS, AND SUPERVISING OF SUPPORT STAFF.

--- LENGTH OF PROGRAM: THE DIETETIC TECHNICIAN PROGRAM IS 24 MONTHS LONG.

--- SPECIAL COSTS: COSTS FOR BOOKS, SUPPLIES AND EQUIPMENT ARE ABOUT \$596.

- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'DIETETIC TECHNICIAN' PROGRAM INTENDS TO PREPARE STUDENTS FOR MANAGERIAL FOOD SERVICE POSITIONS UNDER A DIETITIAN'S SUPERVISION. THEY MAY WORK IN HEALTH CARE, COMMUNITY CARE, OR EDUCATIONAL INSTITUTIONS. IN THE PROGRAM, THEY LEARN TO ASSESS, IMPLEMENT, PLAN, AND EVALUATE FOOD SERVICE OPERATIONS. THIS PROGRAM IS OFFERED JOINTLY WITH 916 AREA VOCATIONAL TECHNICAL INSTITUTE.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE FROM LAKEWOOD COMMUNITY COLLEGE AND 916 AVTI AND A CERTIFICATE OF OCCUPATIONAL PROFICIENCY FROM 916 AVTI ARE OFFERED.

--- LENGTH OF PROGRAM: THE DIETETIC TECHNICIAN PROGRAM IS A 90 QUARTER CREDIT (2 YEAR) PROGRAM.

- - - - - 27156 NORMANDEALE COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'DIETETIC TECHNOLOGY' PROGRAM IS DESIGNED TO TRAIN STUDENTS TO WORK AS ASSISTANTS TO REGISTERED DIETITIAN IN HOSPITALS AND NURSING HOMES OR AS PUBLIC HEALTH NUTRITIONIST ASSISTANTS IN COMMUNITY HEALTH AND FEEDING PROGRAMS. STUDENTS TAKE COURSES IN NUTRITION, BIOLOGY, CHEMISTRY, FOODS, FOOD PRODUCTION, AND HEALTH PERSONNEL SUPERVISION AS WELL AS GENERAL EDUCATION COURSES. TECHNICIAN MEMBERSHIP IN THE AMERICAN DIETETIC ASSOCIATION IS AVAILABLE UPON GRADUATION.

--- DEGREES OFFERED: GRADUATES RECEIVE AN ASSOCIATE IN SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THIS PROGRAM MAY BE COMPLETED IN TWO YEARS.

--- SPECIAL COSTS: COSTS FOR LAB TESTS, TRANSPORTATION TO CLINIC FACILITIES, UNIFORMS AND SHOES, INSURANCE AND BOOKS WILL BE ABOUT \$600.

395 CLOTHING AND TEXTILES

Clothing and textiles programs study the nature and uses of fabrics and apparel products and the relationship of these products to people. Programs intend to prepare people for occupations in the production, marketing, and services related to clothing and other textile products, including selection, construction, maintenance, and alteration. One- to two-year certification and associate degree programs offered at community colleges and vocational schools provide occupational training for custom apparel design, tailoring, drapery design and construction, and drycleaning. Students become familiar with a variety of textiles and learn to use the equipment and tools necessary in the design, construction, or cleaning of clothes and draperies. Some programs include courses in management of businesses providing these services. Bachelor's and graduate programs offered at colleges and universities are designed to provide a background of knowledge about the socio-psychological and economic aspects of clothing and textiles, and further study of design, analysis, production, and marketing of clothing and textile products.

---PROGRAM ADMISSION: A background in art, chemistry, and design is often recommended. Admission requirements vary with programs.

---TYPICAL COURSE WORK: Most clothing and textile programs include lectures and practical laboratory experience. Core courses may include:

Art and Design	Clothing
Chemistry	Psychology
Textiles	Business
Applied Textile Design	

Programs may also include clothing construction, pattern design, history of costume, weaving, housing and home furnishing, and textile analysis.

---GRADUATION REQUIREMENTS: Requirements vary with length and type of program. See school catalogs for more information.

---THINGS TO KNOW: Many schools offer clothing and textile programs as options in home economics programs. A core curriculum of general home economics courses may be required.

---RELATED PROGRAMS: PROG 391 Home Economics, 223 Upholstering and Leatherworking.

---DIRECTLY RELATED OCCUPATIONS: DESC 4441 Clothes Designers, 4446 Tailors, 4448 Sewing Machine Operators, 4464 Laundry Workers.

ASSOCIATED OCCUPATIONS: DESC 4448 Sewing Machine Operators, 4464 Laundry and Drycleaning Workers, 4424 Textile Machine Operators.

CIPS: 19.09
20.03
20.0502
12.01
15.0609

SCHOOLS:

- - - - - 25014 HIBBING AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'APPAREL DESIGN AND PRODUCTION' PROGRAM PREPARES INDIVIDUALS TO DESIGN AND CONSTRUCT READY-TO-WEAR GARMENTS AND APPAREL. INSTRUCTION INCLUDES DESIGNING AND DRAFTING PATTERNS; SELECTING APPROPRIATE FABRICS; USING APPROPRIATE COMMERCIAL EQUIPMENT FOR CONSTRUCTION; APPLYING FINISHES AND NOTIONS TO GARMENTS AND APPAREL; PRESSING AND PACKING GARMENTS OR APPAREL. INSTRUCTION IN INVENTORY, COST CONTROL, PRICING, AND MANAGEMENT IS ALSO INCLUDED.
--- DEGREES OFFERED: A CERTIFICATE OF ATTENDANCE AND A DEGREE OF OCCUPATIONAL PROFICIENCY ARE OFFERED.
--- LENGTH OF PROGRAM: THE APPAREL PROGRAM IS 9 MONTHS LONG.
--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$55 FOR BOOKS, SUPPLIES, EQUIPMENT AND OTHER COSTS.

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'APPAREL DESIGN AND PRODUCTION' PROGRAM PREPARES INDIVIDUALS TO DESIGN AND CONSTRUCT READY-TO-WEAR GARMENTS AND APPAREL. INSTRUCTION INCLUDES DESIGNING AND DRAFTING PATTERNS; SELECTING APPROPRIATE FABRICS; USING APPROPRIATE COMMERCIAL EQUIPMENT FOR CONSTRUCTION; APPLYING FINISHES AND NOTIONS TO GARMENTS AND APPAREL; PRESSING AND PACKING GARMENTS OR APPAREL. INSTRUCTION IN INVENTORY, COST CONTROL, PRICING, AND MANAGEMENT IS ALSO INCLUDED.
--- DEGREES OFFERED: A DIPLOMA IS AWARDED TO STUDENTS WHO COMPLETE THIS PROGRAM.
--- LENGTH OF PROGRAM: THIS PROGRAM IS FROM 4-5 QUARTERS.
--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR APPAREL DESIGN WILL INCLUDE ABOUT \$50 FOR BOOKS, \$80 FOR TOOLS, AND \$50 FOR SUPPLIES.

- - - - - 25021 PIPESTONE AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'CUSTOM TAILORING AND ALTERATIONS' PROGRAM PREPARES INDIVIDUALS TO CONSTRUCT, ALTER AND REPAIR MEN'S, WOMEN'S AND CHILDREN'S GARMENTS. INSTRUCTION INCLUDES SELECTION OF DESIGN, FABRIC AND NOTIONS TO CUSTOMER SPECIFICATIONS; TAKING MEASUREMENTS AND FITTINGS; PREPARING PATTERNS; CUTTING, SEWING, AND ALTERING BY HAND OR MACHINES, AND/OR FINISHING GARMENTS.
--- DEGREES OFFERED: STUDENTS WHO COMPLETE THIS PROGRAM ARE AWARDED A DEGREE OF OCCUPATIONAL PROFICIENCY.
--- LENGTH OF PROGRAM: THIS IS AN 11 MONTH PROGRAM.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'APPAREL DESIGN AND PRODUCTION' PROGRAM PREPARES INDIVIDUALS TO DESIGN AND CONSTRUCT READY-TO-WEAR GARMENTS AND APPAREL. INSTRUCTION INCLUDES DESIGNING AND DRAFTING PATTERNS; SELECTING APPROPRIATE FABRICS; USING APPROPRIATE COMMERCIAL EQUIPMENT FOR CONSTRUCTION; APPLYING FINISHES AND NOTIONS TO GARMENTS AND APPAREL; PRESSING AND PACKING GARMENTS OR APPAREL. INSTRUCTION IN INVENTORY, COST CONTROL, PRICING, AND MANAGEMENT IS ALSO INCLUDED.
--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.
--- LENGTH OF PROGRAM: THIS IS A 16 MONTH PROGRAM.
--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$540 FOR BOOKS, SUPPLIES, TOOLS AND EQUIPMENT.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'APPAREL DESIGN AND PRODUCTION' PROGRAM

PREPARES INDIVIDUALS TO DESIGN AND CONSTRUCT READY-TO-WEAR GARMENTS AND APPAREL. INSTRUCTION INCLUDES DESIGNING AND DRAFTING PATTERNS; SELECTING APPROPRIATE FABRICS; USING APPROPRIATE COMMERCIAL EQUIPMENT FOR CONSTRUCTION; APPLYING FINISHES AND NOTIONS TO GARMENTS AND APPAREL; PRESSING AND PACKING GARMENTS OR APPAREL. INSTRUCTION IN INVENTORY, COST CONTROL, PRICING, AND MANAGEMENT IS ALSO INCLUDED.

- - - - - 27148 ROCHESTER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'FASHION MERCHANDISING' PROGRAM IS DESIGNED FOR STUDENTS TO PREPARE FOR MID-MANAGEMENT EMPLOYMENT AND SUBSEQUENT ADVANCEMENT WITHIN THE APPAREL AND/OR HOME FURNISHING FIELDS. JOBS SUCH AS BUYER, SALES MANAGER, MANUFACTURER'S REPRESENTATIVE, OR FASHION COORDINATOR ARE AVAILABLE.

--- DEGREES OFFERED: A COMMUNITY COLLEGE VOCATIONAL CERTIFICATE AND AN ASSOCIATE OF APPLIED SCIENCE DEGREE ARE OFFERED.

--- LENGTH OF PROGRAM: THE FASHION MERCHANDISING PROGRAM IS EITHER FOUR QUARTERS OR TWO YEARS IN LENGTH.

395 TEXTILES AND CLOTHING TRANSFER PROGRAMS:

- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE

- - - - - 27143 HIBBING COMMUNITY COLLEGE

- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE

- - - - - 83001 BETHANY LUTHERAN JUNIOR COLLEGE

Child development and child care describes a group of programs related to the study of children. Programs in child development and child care intend to teach about the physical, mental, emotional, and social growth and development, and the care and guidance of children. Many programs intend to provide occupational preparation for jobs in public and private child care centers and preschool settings, or for jobs as paraprofessional assistants in schools. One- and two-year programs are offered at community colleges and vocational schools. Shorter programs emphasize the development of practical skills needed for assisting in child care settings. Two-year associate degree programs may provide additional training in planning and directing the activities of children and managing child care centers. Bachelor's and graduate level programs provide a broad base of knowledge about the behavior and development of children. In addition to preparing individuals for occupations in child care, youth programs, and preschool education, programs may provide study in behavioral research methods.

---PROGRAM ADMISSION: Recommended background courses include home economics, art, music, and psychology. A certificate of good health may be required. Programs offering practical experience at child care centers or laboratory preschools may have limited openings.

---TYPICAL COURSE WORK: Shorter programs include lectures and actual experience working in a child care setting to teach child care skills. Courses usually include:

Child Development	Guidance
Nutrition	Program Planning
First Aid	

Longer programs include a strong base in behavioral science courses as well as child development and guidance courses. Core curriculum includes:

Psychology	Child and Family Relations
Sociology	Child Development
Speech Communication	Organization & Administra-
Research Methods	tion of Preschools

Many programs include internships or field experiences in child care centers and preschools.

---GRADUATION REQUIREMENTS: Vary with program; see school catalogs for more details.

---THINGS TO KNOW: Programs providing child care and child development studies may be offered as options in degree programs through other departments such as home economics and education.

---RELATED PROGRAMS: PROG 391 Home Economics, 234 Early Childhood and Elementary Education.

---DIRECTLY RELATED OCCUPATIONS: DESC 8416 Child Care Workers, 8466 Nursery School Teachers.

CIPS: 20.02

SCHOOLS:

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CHILD CARE AND GUIDANCE MANAGEMENT AND SERVICES, GENERAL' PROGRAM PREPARES INDIVIDUALS FOR OCCUPATIONS IN CHILD CARE AND GUIDANCE, FOSTER CARE/FAMILY DAY CARE, AND TEACHER ASSISTANCE, OFTEN UNDER THE SUPERVISION OF PROFESSIONAL PERSONNEL. INSTRUCTION INCLUDES CHILD GROWTH AND DEVELOPMENT; NUTRITION; PROGRAM PLANNING AND MANAGEMENT; SAFETY AND BEHAVIOR GUIDANCE; RECREATIONAL AND PLAY ACTIVITIES; CHILD ABUSE AND NEGLECT; PARENT-CHILD PERSONAL RELATIONSHIPS; LEARNING EXPERIENCES FOR CHILDREN; INTERPERSONAL RELATIONSHIPS; AND LAWS, REGULATIONS, AND POLICIES RELATING TO CHILD-CARE SERVICES AND MAINTENANCE OF CHILDREN'S ENVIRONMENT.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED. AN ASSOCIATE IN APPLIED SCIENCE DEGREE FROM ANOKA-RAMSEY COMMUNITY COLLEGE IS ALSO AVAILABLE.

--- LENGTH OF PROGRAM: THE PROGRAM IS 9 1/2 OR 19 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE \$135 FOR BOOKS AND SUPPLIES AND A \$10 LAB FEE. THEY DO NOT INCLUDE COMMUNITY COLLEGE COSTS.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CHILD CARE AND GUIDANCE MANAGEMENT AND SERVICES, GENERAL' PROGRAM PREPARES INDIVIDUALS FOR OCCUPATIONS IN CHILD CARE AND GUIDANCE, FOSTER CARE/FAMILY DAY CARE, AND TEACHER ASSISTANCE, OFTEN UNDER THE SUPERVISION OF PROFESSIONAL PERSONNEL. INSTRUCTION INCLUDES CHILD GROWTH AND DEVELOPMENT; NUTRITION; PROGRAM PLANNING AND MANAGEMENT; SAFETY AND BEHAVIOR GUIDANCE; RECREATIONAL AND PLAY ACTIVITIES; CHILD ABUSE AND NEGLECT; PARENT-CHILD PERSONAL RELATIONSHIPS; LEARNING EXPERIENCES FOR CHILDREN; INTERPERSONAL RELATIONSHIPS; AND LAWS, REGULATIONS, AND POLICIES RELATING TO CHILD-CARE SERVICES AND MAINTENANCE OF CHILDREN'S ENVIRONMENT.

--- DEGREES OFFERED: A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IS AWARDED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 10 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$40 FOR BOOKS, SUPPLIES AND EQUIPMENT.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CHILD CARE AND GUIDANCE MANAGEMENT AND SERVICES, GENERAL' PROGRAM PREPARES INDIVIDUALS FOR OCCUPATIONS IN CHILD CARE AND GUIDANCE, FOSTER CARE/FAMILY DAY CARE, AND TEACHER ASSISTANCE, OFTEN UNDER THE SUPERVISION OF PROFESSIONAL PERSONNEL. INSTRUCTION INCLUDES CHILD GROWTH AND DEVELOPMENT; NUTRITION; PROGRAM PLANNING AND MANAGEMENT; SAFETY AND BEHAVIOR GUIDANCE; RECREATIONAL AND PLAY ACTIVITIES; CHILD ABUSE AND NEGLECT; PARENT-CHILD PERSONAL RELATIONSHIPS; LEARNING EXPERIENCES FOR CHILDREN; INTERPERSONAL RELATIONSHIPS; AND LAWS, REGULATIONS, AND POLICIES RELATING TO CHILD-CARE SERVICES AND MAINTENANCE OF CHILDREN'S ENVIRONMENT.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 9 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE TOOLS, SUPPLIES, AND EQUIPMENT.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CHILD CARE AND GUIDANCE MANAGEMENT AND SERVICES, GENERAL' PROGRAM PREPARES INDIVIDUALS FOR OCCUPATIONS IN CHILD CARE AND GUIDANCE, FOSTER CARE/FAMILY DAY CARE, AND TEACHER ASSISTANCE, OFTEN UNDER THE SUPERVISION OF PROFESSIONAL PERSONNEL. INSTRUCTION INCLUDES CHILD GROWTH AND DEVELOPMENT; NUTRITION; PROGRAM PLANNING AND MANAGEMENT;

SAFETY AND BEHAVIOR GUIDANCE; RECREATIONAL AND PLAY ACTIVITIES; CHILD ABUSE AND NEGLECT; PARENT-CHILD PERSONAL RELATIONSHIPS; AND LAWS, REGULATIONS, AND POLICIES RELATING TO CHILD CARE SERVICES AND MAINTENANCE OF CHILDREN'S ENVIRONMENT.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 9 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS ARE \$245 FOR BOOKS AND SUPPLIES.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'CHILD CARE AND GUIDANCE MANAGEMENT AND SERVICES, GENERAL' PROGRAM PREPARES INDIVIDUALS FOR OCCUPATIONS IN CHILD CARE AND GUIDANCE, FOSTER CARE/FAMILY DAY CARE, AND TEACHER ASSISTANCE, OFTEN UNDER THE SUPERVISION OF PROFESSIONAL PERSONNEL. INSTRUCTION INCLUDES CHILD GROWTH AND DEVELOPMENT; NUTRITION; PROGRAM PLANNING AND MANAGEMENT; SAFETY AND BEHAVIOR GUIDANCE; RECREATIONAL AND PLAY ACTIVITIES; CHILD ABUSE AND NEGLECT; PARENT-CHILD PERSONAL RELATIONSHIPS; LEARNING EXPERIENCES FOR CHILDREN; INTERPERSONAL RELATIONSHIPS; AND LAWS, REGULATIONS, AND POLICIES RELATING TO CHILD-CARE SERVICES AND MAINTENANCE OF CHILDREN'S ENVIRONMENT.

--- DEGREES OFFERED: A DIPLOMA OF RECOGNITION IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 9 MONTHS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$122 FOR BOOKS AND SUPPLIES.

- - - - - 27140 BRAINERD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'CHILD DEVELOPMENT TECHNOLOGY' CURRICULUM PREPARES STUDENTS FOR SEMI-PROFESSIONAL JOBS CARING FOR AND TRAINING BOTH THE NORMAL AND THE MENTALLY RETARDED CHILD. GRADUATES ARE ELIGIBLE TO TAKE THE CIVIL SERVICE EXAM FOR THIS POSITION. COURSE WORK INCLUDES GENERAL STUDIES AS WELL AS CHILD DEVELOPMENT, RECREATION, COUNSELING, AND PSYCHOLOGY. ALL STUDENTS IN THIS PROGRAM ALSO COMPLETE REQUIRED FIELD EXPERIENCES. THIS PROGRAM IS PRIMARILY EARLY CHILDHOOD EDUCATION.

--- DEGREES OFFERED: GRADUATES RECEIVE AN ASSOCIATE IN SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$400 FOR BOOKS AND SUPPLIES.

- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: TWO PROGRAMS ARE OFFERED: THE 'DAY CARE CERTIFICATE' PROGRAM AND THE 'CHILD DEVELOPMENT ASSISTANT PROGRAMS. THE FIRST IS AN ADULT EDUCATION PROGRAM OFFERED COOPERATIVELY WITH MINNEAPOLIS AVTI. CLASSES ARE HELD IN THE EVENING. THE SECOND IS OFFERED COOPERATIVELY WITH HENNEPIN TECHNICAL CENTERS. STUDENTS IN THIS PROGRAM ATTEND CLASSES DURING THE DAY. IN BOTH PROGRAMS, STUDENTS COMPLETE THEIR TECHNICAL COURSES AT THE AVTI AND THEIR GENERAL EDUCATION COURSES AT MINNEAPOLIS.

--- DEGREES OFFERED: STUDENTS EARN A CERTIFICATE UPON COMPLETION OF THE AVTI COURSES AND AN ASSOCIATE OF APPLIED SCIENCE DEGREE AFTER THEY COMPLETE THE GENERAL EDUCATION COURSES AT MINNEAPOLIS.

--- LENGTH OF PROGRAM: BOTH PROGRAMS ARE 2 YEARS LONG.

- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'CHILD DEVELOPMENT ASSOCIATE' PROGRAM IS OFFERED COOPERATIVELY WITH 916 AVTI. IT IS DESIGNED TO PROVIDE THEORETICAL AND PRACTICAL INSTRUCTION FOR PEOPLE INTERESTED IN WORKING WITH YOUNG CHILDREN. STUDENTS COMPLETE THE CERTIFICATE PROGRAM AT 916 AVTI AND TAKE THEIR GENERAL EDUCATION COURSES AT LAKEWOOD.

--- DEGREES OFFERED: STUDENTS WHO COMPLETE THE PROGRAM EARN AN ASSOCIATE IN APPLIED SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THE 916 CERTIFICATE PROGRAM IS 9 TO 12 MONTHS LONG. THREE QUARTERS OF COURSE WORK AT LAKEWOOD ARE ALSO REQUIRED. 45 CREDITS MUST BE COMPLETED.

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: THE 'NURSERY SCHOOL LICENSURE' PROGRAM OF THE COLLEGE OF LIBERAL ARTS IS OPEN TO STUDENTS IN ANY UNIVERSITY PROGRAM. THOSE WHO COMPLETE THE SPECIAL PROGRAM ARE RECOMMENDED FOR STATE NURSERY SCHOOL TEACHER LICENSURE. CONTINUING EDUCATION AND EXTENSION OFFERS AN 'EARLY CHILDHOOD STUDIES' PROGRAM (45 OR 90 CREDITS) WHICH PROVIDES TRAINING FOR CHILD CARE EMPLOYEES. A GRADUATE LEVEL PROGRAM IN 'EARLY CHILDHOOD EDUCATION' IS OFFERED THROUGH THE COLLEGE OF EDUCATION.

--- DEGREES OFFERED: THE NURSERY SCHOOL LICENSURE PROGRAM QUALIFIES STUDENTS FOR RECOMMENDATION FOR STATE LICENSURE. THOSE WHO COMPLETE THE EARLY CHILDHOOD STUDIES EXTENSION PROGRAM (EITHER 45 OR 90 CREDITS) RECEIVE A CERTIFICATE. THE GRADUATE DEGREE IN EARLY CHILDHOOD STUDIES IS THE MASTER OF EDUCATION.

- - - - - 84005 CONCORDIA COLLEGE (ST. PAUL)

--- OBJECTIVES OF THE PROGRAM: THE 'TEACHER AIDE' PROGRAM IS A TWO YEAR DEGREE PROGRAM DESIGNED TO PREPARE STUDENTS TO BE TEACHERS' AIDES.

--- DEGREES OFFERED: AN ASSOCIATE IN ARTS DEGREE IS OFFERED.

Food service programs provide training for a variety of occupations in the food service industry. Some programs are designed to teach people the food preparation skills necessary for occupations such as cooks, chefs, and kitchen helpers. Other programs are designed to train people to supervise and train workers and to plan and manage food production. Shorter programs train bartenders, buspersons, waiters, and waitresses. Programs range in length from several weeks to two years and are offered by trade schools, public vocational schools, and community colleges. Three year apprentice programs are available to train cooks, bakers, and meat cutters.

---PROGRAM ADMISSION: Many programs require a health certificate. Some programs require a high school diploma; others have no educational requirements.

---TYPICAL COURSE WORK: Course work varies depending on program length and specialty. Programs that train people as cooks and chefs include many hours of practical experience preparing food. Other course work may include:

Safety and Sanitation	Food Storage
Nutrition and Menu Planning	Food Handling
Cost Controls	Catering

Food service management programs include course work in personnel supervision and business management programs.

---GRADUATION REQUIREMENTS: Many programs require students to pass skill competency tests.

---RELATED PROGRAMS: PROG 114 Food Science and Technology, 391 Home Economics, 393 Dietetics, 145 Business Management and Administration, 161 Hotel and Motel Management, 631 Apprenticeship Programs.

---DIRECTLY RELATED OCCUPATIONS: DESC 7824 Chefs 7826 Cooks, 7854 Waiters and Waitresses, 7825 Kitchen Helpers, 1131 Restaurant Managers, 1132 Hotel and Motel Managers, 4324 Bakers, 4326 Meat Cutters.

CIPS: 20.04
12.0202
48.04

SCHOOLS:

- - - - - 25001 ALBERT LEA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FOOD SERVICE OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO SELECT, PURCHASE, PREPARE, OR PRODUCE FOOD IN QUANTITIES; PRESERVE NUTRITIVE VALUE OF FOODS; FOLLOW STANDARDIZED RECIPES FOR QUALITY CONTROL; PREPARE AND SERVE QUANTITY FOODS; RECEIVE, STORE, AND ISSUE FOODS AND SUPPLIES; SELECT AND USE COMMERCIAL EQUIPMENT FOR PRODUCTION AND SERVICES; OBSERVE SAFETY PRECAUTIONS AND SANITATION REGULATIONS; STORE AND HANDLE FOOD AND EQUIPMENT; CLEAN FOOD PREPARATION AND SERVICE AREAS; TAKE INVENTORY; WORK IN OR MANAGE FOODSERVICE ESTABLISHMENTS; AND PLAN AND PREPARE BAKERY PRODUCTS FOR FOOD SERVICE ESTABLISHMENTS.

THE 'FOOD LABORATORY TESTING AND MANAGEMENT' PROGRAM PREPARES INDIVIDUALS TO ASSIST FOOD CHEMISTS AND FOOD PROCESSING ENGINEERS IN PROCESSING RAW FOODSTUFFS INTO MARKETABLE FOOD PRODUCTS BY SELECTING AND GRADING RAW

MATERIALS, AND BY INDUSTRIAL PROCESSES FOR EXTRACTING, CONVERTING, DRYING, FREEZING, PRESERVING, CANNING, PICKLING, SMOKING, RADIATING, CHEMICALLY TREATING, AND PACKAGING PRODUCTS. INSTRUCTION INCLUDES THE BASIC SCIENCES AND SUPPORTING MATHEMATICS OF CHEMISTRY, MICROBIOLOGY AND PHYSICS AS THEY RELATE TO FOOD PROCESSING, AND PROCESSES, EQUIPMENT, SANITATION, INSPECTION, HANDLING PROCEDURES AND TECHNIQUES, PROCESS CONTROL AND SCHEDULING, PRODUCT STORAGE, SHIPPING, AND COST ANALYSIS OF ALTERNATIVE PROCESSES IN THE INDUSTRY AS APPLIED TO SPECIFIC PRODUCTS AND LOCALITIES.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE FOOD SERVICE PROGRAM IS 18 MONTHS LONG. THE FOOD LABORATORY TESTING AND MANAGEMENT PROGRAM IS 20 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$195 THE FIRST YEAR AND \$65 THE SECOND YEAR FOR FOOD SERVICE.

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BAKING AND BAKERY ASSISTANT' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE PREPARATION OF BAKERY FOOD PRODUCTS FOR USE IN COMMERCIAL FOOD ESTABLISHMENTS, FOR RETAIL DISTRIBUTION, OR FOR SPECIAL FUNCTIONS. INSTRUCTION INCLUDES MAKING, FREEZING, AND HANDLING BAKERY PRODUCTS; DECORATING; COUNTER DISPLAY; SERVICE AND PACKAGING OF BAKERY PRODUCTS; INVENTORY AND PURCHASING; COST CONTROL; AND BAKERY MANAGEMENT.

THE 'FOOD SERVICE OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO SELECT, PURCHASE, PREPARE, OR PRODUCE FOOD IN QUANTITIES; PRESERVE NUTRITIVE VALUE OF FOODS; FOLLOW STANDARDIZED RECIPES FOR QUALITY CONTROL; PREPARE AND SERVE QUANTITY FOODS; RECEIVE, STORE, AND ISSUE FOODS AND SUPPLIES; SELECT AND USE COMMERCIAL EQUIPMENT FOR PRODUCTION AND SERVICES; OBSERVE SAFETY PRECAUTIONS AND SANITATION REGULATIONS; STORE AND HANDLE FOOD AND EQUIPMENT; CLEAN FOOD PREPARATION AND SERVICE AREAS; TAKE INVENTORY; WORK IN OR MANAGE FOOD SERVICE ESTABLISHMENTS; AND PLAN AND PREPARE BAKERY PRODUCTS FOR FOOD SERVICE ESTABLISHMENTS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE BAKING PROGRAM IS 10 MONTHS LONG WHILE THE FOOD SERVICE PROGRAM IS 11 MONTHS LONG.

--- SPECIAL COSTS: COSTS FOR THE BAKING PROGRAM WILL INCLUDE UNIFORMS AT APPROXIMATELY \$50, \$25 FOR BOOKS AND SUPPLIES, \$45 FOR TOOLS AND A \$10 LAB DEPOSIT. COSTS FOR THE FOOD SERVICE PROGRAM ARE \$30 FOR BOOKS AND SUPPLIES, \$125 FOR TOOLS, \$.75 PER DAY FOR LUNCH, UNIFORM WHITES AND A \$10 LAB FEE.

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FOOD SERVICE ASSISTANT' PROGRAM MAY INCLUDE, BUT IS NOT LIMITED TO, INSTRUCTION IN BASIC KNOWLEDGE AND SKILLS FOR SANITATION AND SAFETY TECHNIQUES, LIMITED FOOD HANDLING OR PREPARATION, AND STOREROOM PROCEDURES. INSTRUCTION WILL ALSO INCLUDE: MAINTAINING KITCHEN WORK AREAS AND RESTAURANT EQUIPMENT AND UTENSILS IN A CLEAN AND ORDERLY MANNER; SCRAPING FOOD FROM DISHES AND PLACING DISHES ON A CONVEYOR OR RACK OR DISH MACHINE, WASHING POTS AND PANS, AND WORKING TABLES. DEPENDING ON THE GOALS OF THE INDIVIDUAL STUDENT, LIMITED FOOD PREPARATION MAY OR MAY NOT BE INCLUDED IN THE PROGRAM.

- - - - - 25007 CANBY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FOOD SERVICE OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO SELECT, PURCHASE, PREPARE, OR PRODUCE FOOD IN QUANTITIES; PRESERVE NUTRITIVE VALUE OF FOODS; FOLLOW STANDARDIZED RECIPES FOR QUALITY CONTROL; PREPARE AND SERVE QUANTITY FOODS; RECEIVE, STORE, AND

ISSUE FOODS AND SUPPLIES; SELECT AND USE COMMERCIAL EQUIPMENT FOR PRODUCTION AND SERVICES; OBSERVE SAFETY PRECAUTIONS AND SANITATION REGULATIONS; STORE AND HANDLE FOOD AND EQUIPMENT; CLEAN FOOD PREPARATION AND SERVICE AREAS; TAKE INVENTORY; WORK IN OR MANAGE FOOD SERVICE ESTABLISHMENTS; AND PLAN AND PREPARE BAKERY PRODUCTS FOR FOOD SERVICE ESTABLISHMENTS.

--- DEGREES OFFERED: A DIPLOMA OF GRADUATION IN FOOD SERVICE IS OFFERED.

--- LENGTH OF PROGRAM: THE FOOD SERVICE PROGRAM IS 11 MONTHS LONG.

- - - - - 25008 DAKOTA COUNTY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FOOD SERVICE MANAGEMENT' PROGRAM IS DESIGNED TO PROVIDE A BACKGROUND IN FOOD SERVICE THAT ALLOWS THE PERSON TO FUNCTION AS A MANAGER, AN ASSISTANT MANAGER, KITCHEN MANAGER, SUPERVISOR, OR CHEF IN THE FOOD SERVICE INDUSTRY. THE STUDENT'S SPECIFIC EMPLOYMENT OBJECTIVES DETERMINE THE COURSE OF STUDY WHICH IS DESIGNED WITH FLEXIBILITY TO ACHIEVE THOSE GOALS. A BASIC FOOD OR BAKING CORE PROGRAM IS COMPLETED PRIOR TO ENROLLMENT IN THE FOOD SERVICE MANAGEMENT COURSE. IN LIEU OF THE BASIC FOODS OR BAKING PROGRAM, A NEW ENROLLEE IN THE PROGRAM NEEDS TO HAVE 3-5 YEARS OF EXPERIENCE IN THE FIELD. THE INSTRUCTIONAL PROGRAM INCLUDES ANALYSIS AND DECISIONS CONCERNING CONVENIENCE FOODS, FOOD COSTS, QUALITY ASSURANCE PROGRAMS FOR SPECIFIC BUSINESSES, BUSINESS MATH, USE OF THE COMPUTER IN THE INDUSTRY, PRINTING/DISPLAY CALCULATORS, FOOD AND BEVERAGE CONTROL, THEORY OF FOOD PURCHASING, FOOD SERVICE PLANNING, EQUIPMENT LAYOUT, BASIC ACCOUNTING FOR HOTELS AND RESTAURANTS, MANAGEMENT ACCOUNTING, LABOR COSTS, HUMAN RELATIONS, THEORY OF MANAGEMENT, JOB INTERVIEWS, JOB ANALYSIS, JOB SPECIFICATIONS AND DESCRIPTIONS, AND SUPERVISORY SKILLS. EMPLOYMENT MAY BE FOUND IN A VARIETY OF FOOD SERVICE BUSINESSES AND INDUSTRIES. LABORATORY PRACTICE IS INCLUDED IN THE PROGRAM.

THE 'MEATCUTTING/SLAUGHTERING/BUTCHERING' PROGRAM TRAINS INDIVIDUALS TO PERFORM SLAUGHTERING AND BUTCHERING OPERATIONS IN A SLAUGHTERING AND MEAT PACKING ESTABLISHMENT; TO PREPARE CARCASSES FOR WHOLESALE OR RETAIL SALE; AND/OR TO PREPARE INDIVIDUALS TO CUT, TRIM AND PREPARE CARCASSES AND CONSUMER SIZED PORTIONS OF MEAT FOR SALE IN WHOLESALE, RETAIL OR FOOD SERVICE ESTABLISHMENTS. INSTRUCTION INCLUDES THE USE OF CUTTING TOOLS; IDENTIFICATION OF AND CUTTING TECHNIQUES FOR DIFFERENT CUTS OF MEAT; DRESSING POULTRY; PROCESSING FISH; COLOR DISPLAY; AND REFRIGERATION OF MEATS, POULTRY, AND FISH. SLAUGHTERING AND BUTCHERING INCLUDES INSTRUCTION IN STUNNING AND SLAUGHTERING; SKINNING, TRIMMING, AND WASHING; CUTTING STANDARD CUTS OF MEAT; PREPARATION FOR MARKETING; CLEANING AND SALTING OF HIDES OF CATTLE, SHEEP, AND HOGS; PREPARING, SMOKING AND WRAPPING MEATS; AND MAKING SAUSAGE.

--- DEGREES OFFERED: CERTIFICATES AND DEGREES OF OCCUPATIONAL PROFICIENCY ARE OFFERED.

--- LENGTH OF PROGRAM: THE FOOD SERVICE MANAGEMENT TRAINING PROGRAMS ARE FROM 9 TO 22 MONTHS LONG AND THE MEAT CUTTING PROGRAM IS 11 MONTHS LONG.

- - - - - 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FOOD SERVICE OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO SELECT, PURCHASE, PREPARE, OR PRODUCE FOOD IN QUANTITIES; PRESERVE NUTRITIVE VALUE OF FOODS; FOLLOW STANDARDIZED RECIPES FOR QUALITY CONTROL; PREPARE AND SERVE QUANTITY FOODS; RECEIVE, STORE, AND ISSUE FOODS AND SUPPLIES; SELECT AND USE COMMERCIAL EQUIPMENT FOR PRODUCTION AND SERVICES; OBSERVE SAFETY PRECAUTIONS AND SANITATION REGULATIONS; STORE AND HANDLE FOOD AND EQUIPMENT; CLEAN FOOD PREPARATION AND SERVICE AREAS; TAKE INVENTORY; WORK IN OR MANAGE FOOD SERVICE ESTABLISHMENTS; AND PLAN AND PREPARE BAKERY PRODUCTS FOR FOOD SERVICE ESTABLISHMENTS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.
--- LENGTH OF PROGRAM: THE PROGRAM IS 10 MONTHS LONG.
--- SPECIAL COSTS: BOOKS COST \$50 AND UNIFORMS COST \$220.

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BAKING AND BAKERY ASSISTANT' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE PREPARATION OF BAKERY FOOD PRODUCTS FOR USE IN COMMERCIAL FOOD ESTABLISHMENTS, FOR RETAIL DISTRIBUTION, OR FOR SPECIAL FUNCTIONS. INSTRUCTION INCLUDES MAKING, FREEZING, AND HANDLING BAKERY PRODUCTS; DECORATING; COUNTER DISPLAY; SERVICE AND PACKAGING OF BAKERY PRODUCTS; INVENTORY AND PURCHASING; COST CONTROL; AND BAKERY MANAGEMENT.

THE 'FOOD SERVICE MANAGEMENT' PROGRAM IS DESIGNED TO PROVIDE A BACKGROUND IN FOOD SERVICE THAT ALLOWS THE PERSON TO FUNCTION AS A MANAGER, AN ASSISTANT MANAGER, KITCHEN MANAGER, SUPERVISOR, OR CHEF IN THE FOOD SERVICE INDUSTRY. THE STUDENT'S SPECIFIC EMPLOYMENT OBJECTIVES DETERMINE THE COURSE OF STUDY WHICH IS DESIGNED WITH FLEXIBILITY TO ACHIEVE THOSE GOALS. A BASIC FOOD OR BAKING CORE PROGRAM IS COMPLETED PRIOR TO ENROLLMENT IN THE FOOD SERVICE MANAGEMENT COURSE. IN LIEU OF THE BASIC FOODS OR BAKING PROGRAM, A NEW ENROLLEE IN THE PROGRAM NEEDS TO HAVE 3-5 YEARS OF EXPERIENCE IN THE FIELD. THE INSTRUCTIONAL PROGRAM INCLUDES ANALYSIS AND DECISIONS CONCERNING CONVENIENCE FOODS, FOOD COSTS, QUALITY ASSURANCE PROGRAMS FOR SPECIFIC BUSINESSES, BUSINESS MATH, USE OF THE COMPUTER IN THE INDUSTRY, PRINTING/DISPLAY CALCULATORS, FOOD AND BEVERAGE CONTROL, THEORY OF FOOD PURCHASING, FOOD SERVICE PLANNING, EQUIPMENT LAYOUT, BASIC ACCOUNTING FOR HOTELS AND RESTAURANTS, MANAGEMENT ACCOUNTING, LABOR COSTS, HUMAN RELATIONS, THEORY OF MANAGEMENT, JOB INTERVIEWS, JOB ANALYSIS, JOB SPECIFICATIONS AND DESCRIPTIONS, AND SUPERVISORY SKILLS. EMPLOYMENT MAY BE FOUND IN A VARIETY OF FOOD SERVICE BUSINESSES AND INDUSTRIES. LABORATORY PRACTICE IS INCLUDED IN THE PROGRAM.

THE 'FOOD SERVICE OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO SELECT, PURCHASE, PREPARE, OR PRODUCE FOOD IN QUANTITIES; PRESERVE NUTRITIVE VALUE OF FOODS; FOLLOW STANDARDIZED RECIPES FOR QUALITY CONTROL; PREPARE AND SERVE QUANTITY FOODS; RECEIVE, STORE, AND ISSUE FOODS AND SUPPLIES; SELECT AND USE COMMERCIAL EQUIPMENT FOR PRODUCTION AND SERVICES; OBSERVE SAFETY PRECAUTIONS AND SANITATION REGULATIONS; STORE AND HANDLE FOOD AND EQUIPMENT; CLEAN FOOD PREPARATION AND SERVICE AREAS; TAKE INVENTORY; WORK IN OR MANAGE FOOD SERVICE ESTABLISHMENTS; AND PLAN AND PREPARE BAKERY PRODUCTS FOR FOOD SERVICE ESTABLISHMENTS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.
--- LENGTH OF PROGRAM: THESE 3 PROGRAMS ARE EACH UP TO 46 WEEKS LONG.
--- SPECIAL COSTS: PROGRAM RELATED COSTS FOR THE BAKING PROGRAM WILL BE \$150; AND FOR THE FOOD SERVICE MANAGEMENT PROGRAM THEY WILL BE \$150.

- - - - - 25014 HIBBING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FOOD SERVICE OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO SELECT, PURCHASE, PREPARE, OR PRODUCE FOOD IN QUANTITIES; PRESERVE NUTRITIVE VALUE OF FOODS; FOLLOW STANDARDIZED RECIPES FOR QUALITY CONTROL; PREPARE AND SERVE QUANTITY FOODS; RECEIVE, STORE, AND ISSUE FOODS AND SUPPLIES; SELECT AND USE COMMERCIAL EQUIPMENT FOR PRODUCTION AND SERVICES; OBSERVE SAFETY PRECAUTIONS AND SANITATION REGULATIONS; STORE AND HANDLE FOOD AND EQUIPMENT; CLEAN FOOD PREPARATION AND SERVICE AREAS; TAKE INVENTORY; WORK IN OR MANAGE FOOD SERVICE ESTABLISHMENTS; AND PLAN AND PREPARE BAKERY PRODUCTS FOR FOOD SERVICE ESTABLISHMENTS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE LENGTH OF THE FOOD SERVICE PROGRAM IS 18 MONTHS.
--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$145 PER YEAR FOR BOOKS, SUPPLIES, EQUIPMENT AND OTHER COSTS.

- - - - - 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BAKING AND BAKERY ASSISTANT' PROGRAM PREPARES INDIVIDUALS TO ENGAGE IN THE PREPARATION OF BAKERY FOOD PRODUCTS FOR USE IN COMMERCIAL FOOD ESTABLISHMENTS, FOR RETAIL DISTRIBUTION, OR FOR SPECIAL FUNCTIONS. INSTRUCTION INCLUDES MAKING, FREEZING, AND HANDLING BAKERY PRODUCTS; DECORATING; COUNTER DISPLAY; SERVICE AND PACKAGING OF BAKERY PRODUCTS; INVENTORY AND PURCHASING; COST CONTROL, AND BAKERY MANAGEMENT.

THE 'FOOD SERVICE OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO SELECT, PURCHASE, PREPARE, OR PRODUCE FOOD IN QUANTITIES; PRESERVE NUTRITIVE VALUE OF FOODS; FOLLOW STANDARDIZED RECIPES FOR QUALITY CONTROL; PREPARE AND SERVE QUANTITY FOODS; RECEIVE, STORE, AND ISSUE FOODS AND SUPPLIES; SELECT AND USE COMMERCIAL EQUIPMENT FOR PRODUCTION AND SERVICES; OBSERVE SAFETY PRECAUTIONS AND SANITATION REGULATIONS; STORE AND HANDLE FOOD AND EQUIPMENT; CLEAN FOOD PREPARATION AND SERVICE AREAS; TAKE INVENTORY; WORK IN OR MANAGE FOOD SERVICE ESTABLISHMENTS; AND PLAN AND PREPARE BAKERY PRODUCTS FOR FOOD SERVICE ESTABLISHMENTS.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS AWARDED TO STUDENTS WHO SUCCESSFULLY COMPLETE EACH PROGRAM.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE BOTH 42 WEEKS PROGRAMS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$130 FOR THE BAKING PROGRAM AND \$210 FOR THE FOOD SERVICE PROGRAM.

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FOOD SERVICE OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO SELECT, PURCHASE, PREPARE, OR PRODUCE FOOD IN QUANTITIES; PRESERVE NUTRITIVE VALUE OF FOODS; FOLLOW STANDARDIZED RECIPES FOR QUALITY CONTROL; PREPARE AND SERVE QUANTITY FOODS; RECEIVE, STORE, AND ISSUE FOODS AND SUPPLIES; SELECT AND USE COMMERCIAL EQUIPMENT FOR PRODUCTION AND SERVICES; OBSERVE SAFETY PRECAUTIONS AND SANITATION REGULATIONS; STORE AND HANDLE FOOD AND EQUIPMENT; CLEAN FOOD PREPARATION AND SERVICE AREAS; TAKE INVENTORY; WORK IN OR MANAGE FOOD SERVICE ESTABLISHMENTS; AND PLAN AND PREPARE BAKERY PRODUCTS FOR FOOD SERVICE ESTABLISHMENTS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: THE PROGRAM LASTS UP TO 5 QUARTERS.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$125 FOR BOOKS AND \$175 FOR UNIFORMS AND/OR SUPPLIES.

- - - - - 25019 MOORHEAD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FOOD SERVICE OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO SELECT, PURCHASE, PREPARE, OR PRODUCE FOOD IN QUANTITIES; PRESERVE NUTRITIVE VALUE OF FOODS; FOLLOW STANDARDIZED RECIPES FOR QUALITY CONTROL; PREPARE AND SERVE QUANTITY FOODS; RECEIVE, STORE, AND ISSUE FOODS AND SUPPLIES; SELECT AND USE COMMERCIAL EQUIPMENT FOR PRODUCTION AND SERVICES; OBSERVE SAFETY PRECAUTIONS AND SANITATION REGULATIONS; STORE AND HANDLE FOOD AND EQUIPMENT; CLEAN FOOD PREPARATION AND SERVICE AREAS; TAKE INVENTORY; WORK IN OR MANAGE FOOD SERVICE ESTABLISHMENTS; AND PLAN AND PREPARE BAKERY PRODUCTS FOR FOOD SERVICE ESTABLISHMENTS.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED IN THIS PROGRAM.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 11-20 MONTHS LONG.

- - - - - 25021 PIPESTONE AREA VOCATIONAL TECHNICAL INSTITUT

--- OBJECTIVES OF THE PROGRAM: THE 'MEATCUTTING/SLAUGHTERING/ BUTCHERING PROGRAM TRAINS INDIVIDUALS TO PERFORM SLAUGHTERING AND BUTCHERING OPERATIONS IN A SLAUGHTERING AND MEAT PACKING ESTABLISHMENT; PREPARE CARCASSES FOR WHOLESALE OR RETAIL SALE; AND/OR PREPARE INDIVIDUALS TO CUT, TRIM AND PREPARE CARCASSES AND CONSUMER SIZED PORTIONS OF MEAT FOR SALE IN WHOLESALE, RETAIL OR FOOD SERVICE ESTABLISHMENTS. INSTRUCTION INCLUDES THE USE OF CUTTING TOOLS; IDENTIFICATION OF AND CUTTING TECHNIQUES FOR DIFFERENT CUTS OF MEAT; DRESSING POULTRY; PROCESSING FISH; COLOR DISPLAY; AND REFRIGERATION OF MEATS, POULTRY, AND FISH. SLAUGHTERING AND BUTCHERING INCLUDES INSTRUCTION IN STUNNING AND SLAUGHTERING; SKINNING, TRIMMING, AND WASHING; CUTTING STANDARD CUTS OF MEAT; PREPARATION FOR MARKETING; AND CLEANING AND SALTING OF HIDES OF CATTLE, SHEEP, AND HOGS; PREPARING, SMOKING AND WRAPPING MEATS; AND MAKING SAUSAGE.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 22 MONTHS LONG.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FOOD SERVICE OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO SELECT, PURCHASE, PREPARE, OR PRODUCE FOOD IN QUANTITIES; PRESERVE NUTRITIVE VALUE OF FOODS; FOLLOW STANDARDIZED RECIPES FOR QUALITY CONTROL; PREPARE AND SERVE QUANTITY FOODS; RECEIVE, STORE, AND ISSUE FOODS AND SUPPLIES; SELECT AND USE COMMERCIAL EQUIPMENT FOR PRODUCTION AND SERVICES; OBSERVE SAFETY PRECAUTIONS AND SANITATION REGULATIONS; STORE AND HANDLE FOOD AND EQUIPMENT; CLEAN FOOD PREPARATION AND SERVICE AREAS; TAKE INVENTORY; WORK IN OR MANAGE FOOD SERVICE ESTABLISHMENTS; AND PLAN AND PREPARE BAKERY PRODUCTS FOR FOOD SERVICE ESTABLISHMENTS.

THE 'FOOD SERVICE ASSISTANT' PROGRAM MAY INCLUDE, BUT IS NOT LIMITED TO, INSTRUCTION IN BASIC KNOWLEDGE AND SKILLS FOR SANITATION AND SAFETY TECHNIQUES, LIMITED FOOD HANDLING OR PREPARATION, AND STOREROOM PROCEDURES. INSTRUCTION WILL ALSO INCLUDE: MAINTAINING KITCHEN WORK AREAS AND RESTAURANT EQUIPMENT AND UTENSILS IN A CLEAN AND ORDERLY MANNER; SCRAPING FOOD FROM DISHES AND PLACING DISHES ON A CONVEYOR RACK OR DISH MACHINE, WASHING POTS AND PANS, AND WORKING TABLES. DEPENDING ON THE GOALS OF THE INDIVIDUAL STUDENT, LIMITED FOOD PREPARATION MAY OR MAY NOT BE INCLUDED IN THE PROGRAM.

THE 'FOOD SERVICE AND MANAGEMENT TRAINING' PROGRAM IS AN ADVANCED INSTRUCTIONAL PROGRAM WHICH FOLLOWS PART OF THE BASIC FOOD SERVICE TRAINING PROGRAM. TRAINING IN MANAGERIAL, PRODUCTION AND SERVICE SKILLS USED IN INSTITUTIONAL, COMMERCIAL, OR SELF-OWNED ESTABLISHMENTS OR OTHER FOOD INDUSTRY OCCUPATIONS IS PROVIDED. INSTRUCTION INCLUDES MANAGEMENT OF ALL RESOURCES - HUMAN, FINANCIAL AND EQUIPMENT/FACILITIES; PLANNING AND PREPARING BAKERY PRODUCTS FOR FOOD SERVICE ESTABLISHMENTS AND GENERAL PLANNING AND SELECTING.

THE 'FOOD LABORATORY TESTING AND MANAGEMENT' PROGRAM PREPARES INDIVIDUALS TO ASSIST FOOD CHEMISTS AND FOOD PROCESSING ENGINEERS IN PROCESSING RAW FOOD STUFFS INTO MARKETABLE FOOD PRODUCTS BY SELECTING AND GRADING RAW MATERIALS, AND BY INDUSTRIAL PROCESSES FOR EXTRACTING, CONVERTING, DRYING, FREEZING, PRESERVING, CANNING, PICKLING, SMOKING, RADIATING, CHEMICALLY TREATING, AND PACKAGING PRODUCTS. INSTRUCTION INCLUDES THE BASIC SCIENCES AND SUPPORTING MATHEMATICS OF CHEMISTRY, MICROBIOLOGY AND PHYSICS AS THEY RELATE TO FOOD PROCESSING, AND PROCESSES, EQUIPMENT, SANITATION, INSPECTION, HANDLING PROCEDURES AND TECHNIQUES, PROCESS CONTROL AND SCHEDULING, PRODUCT STORAGE, SHIPPING, AND COST ANALYSIS OF ALTERNATIVE PROCESSES IN THE INDUSTRY AS APPLIED TO SPECIFIC PRODUCTS AND LOCALITIES.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: FOOD SERVICE OCCUPATIONS IS AN 18 MONTH PROGRAM; FOOD SERVICE ASSISTANT IS 4 MONTHS LONG. THE FOOD LABORATORY TESTING AND MANAGEMENT PROGRAM IS 23 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$108 FOR FOOD SERVICE OCCUPATIONS AND \$148 FOR FOOD SERVICE ASSISTANT FOR BOOKS, SUPPLIES AND EQUIPMENT.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FOOD SERVICE OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO SELECT, PURCHASE, PREPARE, OR PRODUCE FOOD IN QUANTITIES; PRESERVE NUTRITIVE VALUE OF FOODS; FOLLOW STANDARDIZED RECIPES FOR QUALITY CONTROL; PREPARE AND SERVE QUANTITY FOODS; RECEIVE, STORE, AND ISSUE FOODS AND SUPPLIES; SELECT AND USE COMMERCIAL EQUIPMENT FOR PRODUCTION AND SERVICES; OBSERVE SAFETY PRECAUTIONS AND SANITATION REGULATIONS; STORE AND HANDLE FOOD AND EQUIPMENT; CLEAN FOOD PREPARATION AND SERVICE AREAS; TAKE INVENTORY; WORK IN OR MANAGE FOOD SERVICE ESTABLISHMENTS; AND PLAN AND PREPARE BAKERY PRODUCTS FOR FOOD SERVICE ESTABLISHMENTS.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 9 MONTH PROGRAM.

--- SPECIAL COSTS: COSTS WILL INCLUDE TOOLS, SUPPLIES, AND EQUIPMENT.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FOOD SERVICE OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO SELECT, PURCHASE, PREPARE, OR PRODUCE FOOD IN QUANTITIES; PRESERVE NUTRITIVE VALUE OF FOODS; FOLLOW STANDARDIZED RECIPES FOR QUALITY CONTROL; PREPARE AND SERVE QUANTITY FOODS; RECEIVE, STORE, AND ISSUE FOODS AND SUPPLIES; SELECT AND USE COMMERCIAL EQUIPMENT FOR PRODUCTION AND SERVICES; OBSERVE SAFETY PRECAUTIONS AND SANITATION REGULATIONS; STORE AND HANDLE FOOD AND EQUIPMENT; CLEAN FOOD PREPARATION AND SERVICE AREAS; TAKE INVENTORY; WORK IN OR MANAGE FOOD SERVICE ESTABLISHMENTS; AND PLAN AND PREPARE BAKERY PRODUCTS FOR FOOD SERVICE ESTABLISHMENTS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 10 1/2 MONTHS LONG.

--- SPECIAL COSTS: COST FOR TOOLS, BOOKS AND SUPPLIES IS \$250.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FOOD SERVICE OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO SELECT, PURCHASE, PREPARE, OR PRODUCE FOOD IN QUANTITIES; PRESERVE NUTRITIVE VALUE OF FOODS; FOLLOW STANDARDIZED RECIPES FOR QUALITY CONTROL; PREPARE AND SERVE QUANTITY FOODS; RECEIVE, STORE, AND ISSUE FOODS AND SUPPLIES; SELECT AND USE COMMERCIAL EQUIPMENT FOR PRODUCTION AND SERVICES; OBSERVE SAFETY PRECAUTIONS AND SANITATION REGULATIONS; STORE AND HANDLE FOOD AND EQUIPMENT; CLEAN FOOD PREPARATION AND SERVICE AREAS; TAKE INVENTORY; WORK IN OR MANAGE FOOD SERVICE ESTABLISHMENTS; AND PLAN AND PREPARE BAKERY PRODUCTS FOR FOOD SERVICE ESTABLISHMENTS.

THE 'FOOD SERVICE ASSISTANT' PROGRAM MAY INCLUDE, BUT IS NOT LIMITED TO, INSTRUCTION IN BASIC KNOWLEDGE AND SKILLS FOR SANITATION AND SAFETY TECHNIQUES, LIMITED FOOD HANDLING OR PREPARATION, AND STOREROOM PROCEDURES. INSTRUCTION WILL ALSO INCLUDE: MAINTAINING KITCHEN WORK AREAS AND RESTAURANT EQUIPMENT AND UTENSILS IN A CLEAN AND ORDERLY MANNER; SCRAPING FOOD FROM DISHES AND PLACING DISHES ON A CONVEYOR, RACK OR DISH MACHINE,

WASHING POTS AND PANS; AND WORKING TABLES. DEPENDING ON THE GOALS OF THE INDIVIDUAL STUDENTS, LIMITED FOOD PREPARATION MAY OR MAY NOT BE INCLUDED IN THE PROGRAM.

--- DEGREES OFFERED: A DIPLOMA IS AWARDED.

--- LENGTH OF PROGRAM: FOOD SERVICE OCCUPATIONS IS 11 MONTHS LONG AND STARTS QUARTERLY.

--- SPECIAL COSTS: COSTS ARE ESTIMATED AT \$240 FOR BOOKS AND SUPPLIES.

- - - - - 25026 STAPLES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FOOD SERVICE OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO SELECT, PURCHASE, PREPARE, OR PRODUCE FOOD IN QUANTITIES; PRESERVE NUTRITIVE VALUE OF FOODS; FOLLOW STANDARDIZED RECIPES FOR QUALITY CONTROL; PREPARE AND SERVE QUANTITY FOODS; RECEIVE, STORE, AND ISSUE FOODS AND SUPPLIES; SELECT AND USE COMMERCIAL EQUIPMENT FOR PRODUCTION AND SERVICES; OBSERVE SAFETY PRECAUTIONS AND SANITATION REGULATIONS; STORE AND HANDLE FOOD AND EQUIPMENT; CLEAN FOOD PREPARATION AND SERVICE AREAS; TAKE INVENTORY; WORK IN OR MANAGE FOOD SERVICE ESTABLISHMENTS; AND PLAN AND PREPARE BAKERY PRODUCTS FOR FOOD SERVICE ESTABLISHMENTS.

--- DEGREES OFFERED: A DIPLOMA OR TRADE CERTIFICATE IS AWARDED.

--- LENGTH OF PROGRAM: THIS PROGRAM LASTS 9 MONTHS.

--- SPECIAL COSTS: BOOKS, TOOLS, UNIFORMS AND OTHER SUPPLIES ARE PROVIDED BY THE INSTITUTE AT A MINIMAL CHARGE.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: THE 'FOOD SERVICE OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO SELECT, PURCHASE, PREPARE, OR PRODUCE FOOD IN QUANTITIES; PRESERVE NUTRITIVE VALUE OF FOODS; FOLLOW STANDARDIZED RECIPES FOR QUALITY CONTROL; PREPARE AND SERVE QUANTITY FOODS; RECEIVE, STORE, AND ISSUE FOODS AND SUPPLIES; SELECT AND USE COMMERCIAL EQUIPMENT FOR PRODUCTION AND SERVICES; OBSERVE SAFETY PRECAUTIONS AND SANITATION REGULATIONS; STORE AND HANDLE FOOD AND EQUIPMENT; CLEAN FOOD PREPARATION AND SERVICE AREAS; TAKE INVENTORY; WORK IN OR MANAGE FOOD SERVICE ESTABLISHMENTS; AND PLAN AND PREPARE BAKERY PRODUCTS FOR FOOD SERVICE ESTABLISHMENTS.

THE 'FOOD SERVICE MANAGEMENT' PROGRAM PROVIDES A BACKGROUND IN FOOD SERVICE THAT ALLOWS THE PERSON TO FUNCTION AS A MANAGER, AN ASSISTANT MANAGER, KITCHEN MANAGER, SUPERVISOR, OR CHEF IN THE FOOD SERVICE INDUSTRY. THE STUDENT'S SPECIFIC EMPLOYMENT OBJECTIVES DETERMINE THE COURSE OF STUDY WHICH IS DESIGNED WITH FLEXIBILITY TO ACHIEVE THOSE GOALS. A BASIC FOOD OR BAKING CORE PROGRAM IS COMPLETED PRIOR TO ENROLLMENT IN THE FOOD SERVICE MANAGEMENT COURSE. IN LIEU OF THE BASIC FOODS OR BAKING PROGRAM, A NEW ENROLLEE IN THE PROGRAM NEEDS TO HAVE 3-5 YEARS OF EXPERIENCE IN THE FIELD. THE INSTRUCTIONAL PROGRAM INCLUDES ANALYSIS AND DECISIONS CONCERNING CONVENIENCE FOODS, FOOD COSTS, QUALITY ASSURANCE PROGRAMS FOR SPECIFIC BUSINESSES, BUSINESS MATH, USE OF THE COMPUTER IN THE INDUSTRY, PRINTING/DISPLAY CALCULATORS, FOOD AND BEVERAGE CONTROL, THEORY OF FOOD PURCHASING, FOOD SERVICE PLANNING, EQUIPMENT LAYOUT, BASIC ACCOUNTING FOR HOTELS AND RESTAURANTS, MANAGEMENT ACCOUNTING, LABOR COSTS, HUMAN RELATIONS, THEORY OF MANAGEMENT, JOB INTERVIEWS, JOB ANALYSIS, JOB SPECIFICATIONS AND DESCRIPTIONS, AND SUPERVISORY SKILLS. EMPLOYMENT MAY BE FOUND IN A VARIETY OF FOOD SERVICE BUSINESSES AND INDUSTRIES. LABORATORY PRACTICE IS INCLUDED IN THE PROGRAM.

--- DEGREES OFFERED: A DIPLOMA OF RECOGNITION IS OFFERED.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE 12 MONTHS LONG.

--- SPECIAL COSTS: BOOKS AND SUPPLIES ARE \$260.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FOOD SERVICE OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO SELECT, PURCHASE, PREPARE, OR PRODUCE FOOD IN QUANTITIES; PRESERVE NUTRITIVE VALUE OF FOODS; FOLLOW STANDARDIZED RECIPES FOR QUALITY CONTROL; PREPARE AND SERVE QUANTITY FOODS; RECEIVE, STORE, AND ISSUE FOODS AND SUPPLIES; SELECT AND USE COMMERCIAL EQUIPMENT FOR PRODUCTION AND SERVICES; OBSERVE SAFETY PRECAUTIONS AND SANITATION REGULATIONS; STORE AND HANDLE FOOD AND EQUIPMENT; CLEAN FOOD PREPARATION AND SERVICE AREAS; TAKE INVENTORY; WORK IN OR MANAGE FOOD SERVICE ESTABLISHMENTS; AND PLAN AND PREPARE BAKERY PRODUCTS FOR FOOD SERVICE ESTABLISHMENTS.

--- DEGREES OFFERED: STUDENTS WHO COMPLETE THE PROGRAM RECEIVE A DEGREE OF OCCUPATIONAL PROFICIENCY.

--- LENGTH OF PROGRAM: THERE IS A 10 MONTH OPTION AND A 19 MONTH OPTION.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$155 FOR BOOKS (ALL USABLE BOOKS ARE BOUGHT BACK AT 70 PERCENT OF PAID PRICE), \$90 FOR UNIFORMS, AND \$85 FOR KNIVES.

- - - - - 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: 'RESTAURANT MANAGEMENT', 'INSTITUTIONAL FOOD SERVICE MANAGEMENT', AND 'DIETETIC TECHNICIAN' PROGRAMS ARE OFFERED. IN THE FIRST PROGRAM, STUDENTS TAKE MANY FOOD PREPARATION AND MANAGEMENT COURSES. INSTITUTIONAL FOOD SERVICE MANAGEMENT STUDENTS TAKE MORE COURSES IN SCIENCE, CHEMISTRY, FOOD PROPERTIES, AND DIETS. THOSE IN THE DIETETIC TECHNICIAN PROGRAM TAKE COURSES IN SCIENCE AND NUTRITION. GENERAL EDUCATION COURSES AND INTERNSHIPS ARE REQUIRED IN ALL THREE PROGRAMS.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED IN EACH PROGRAM.

--- LENGTH OF PROGRAM: THESE ARE 2 YEAR PROGRAMS.

- - - - - 82009 DUNWOODY INDUSTRIAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BREAD AND ROLLS' AND 'CAKES AND PASTRIES' PROGRAMS ARE DESIGNED TO PREPARE STUDENTS FOR CAREERS IN THE BAKING TRADE. STUDENTS MAY TAKE 1 OR BOTH OF THESE PROGRAMS. STUDENTS ATTEND CLASSROOM INSTRUCTION AS WELL AS GAIN PRACTICAL EXPERIENCE IN PRODUCING YEAST RAISED PRODUCTS AND SWEET GOODS. STUDENTS ALSO ARE PROVIDED WITH SALES AND CUSTOMER RELATIONS OPPORTUNITIES.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED FOR EACH OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE EACH 5 TRAINING PERIODS OF 4 WEEKS EACH (20 WEEKS).

--- SPECIAL COSTS: COSTS WILL INCLUDE UNIFORMS AND EQUIPMENT.

- - - - - 82026 MINNESOTA SCHOOL OF BARTENDING

--- OBJECTIVES OF THE PROGRAM: THE 'BARTENDING' PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR CAREERS AS BARTENDERS. THEY MAY WORK AT THEIR OWN PACE, ATTENDING 1 TO 8 HOURS PER DAY. STUDENTS ARE TAUGHT HOW TO PREPARE 75 BASIC COCKTAILS, HOW TO FILL GROUP ORDERS FROM WAITERS/WAITRESSES, AND HOW TO PREPARE ORDERS QUICKLY. THEY ALSO STUDY LIQUOR BRANDS AND CLASSIFICATION AND USE OF BLENDERS AND SHAKERS. THEY ALSO LEARN THE PSYCHOLOGY OF BARTENDING, MONEY HANDLING, CHECK CASHING, AND I.D. CARD PROCEDURES.

--- DEGREES OFFERED: A DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THE AVERAGE LENGTH OF TIME TO COMPLETE THE BARTENDING PROGRAM IS ABOUT 50 HOURS, HOWEVER, SINCE STUDENTS WORK AT THEIR

OWN PACE, THEY MAY TAKE MORE OR LESS TIME TO COMPLETE THE PROGRAM.

--- SPECIAL COSTS: COSTS INCLUDE BOOKS AND MATERIALS. TOTAL COST IS \$195.

- - - - - 82111 L'HOTEL SOFITEL SCHOOL OF FRENCH CULINARY SKILLS

--- OBJECTIVES OF THE PROGRAM: THE 'FRENCH CULINARY SKILLS' PROGRAM CONSISTS OF THEORY INSTRUCTION BY CHEFS DESIGNATED BY THE FRENCH MINISTRY OF EDUCATION, FLOWN FROM FRANCE TO TEACH IN THE SPECIALLY DESIGNED CHEF TRAINING KITCHEN OF HOTEL SOFITEL. STUDENTS WILL RECEIVE FURTHER INSTRUCTION IN THEORY AND HANDS-ON TRAINING IN THE VARIOUS AREAS OF THE KITCHENS OF THE U.S. SOFITELS. STUDENTS WILL SPEND ONE-HALF DAY OF EACH WEEK IN SPECIFIC CLASSROOM INSTRUCTION. SUBJECTS COVERED WILL INCLUDE THE METRIC SYSTEM, NUTRITION, HEALTH, FRENCH VOCABULARY AND GEOGRAPHY AND CUSTOMS OF THE GASTRONOMICALLY IMPORTANT FRENCH REGIONS. THE HEARTIER REGIONAL COOKERY, AS WELL AS CLASSIC FRENCH CUISINE, BAKERY AND PASTRY PREPARATION WILL BE TAUGHT. ALTHOUGH BECOMING A TRULY KNOWLEDGEABLE STEWARD TAKES MANY YEARS, THE STUDENT WILL SPEND A FULL WEEK IN THE STEWARD DEPARTMENT SO, SHOULD THE FUTURE INVOLVE SERVICE IN A SMALL ESTABLISHMENT, HE/SHE WOULD HAVE A FUNCTIONAL KNOWLEDGE. THE 56TH WEEK OF THE PROGRAM WILL CONSIST OF INDIVIDUALLY DESIGNED REVIEW IN PREPARATION FOR THE EXAMINATION FOR CERTIFICATE, SCHEDULED FOR THE 57TH WEEK.

---DEGREES OFFERED: A CERTIFICATE IS OFFERED.

---LENGTH OF PROGRAM: THE FRENCH CULINARY SKILLS PROGRAM IS 57 WEEKS LONG.

---SPECIAL COSTS: PROGRAM RELATED COSTS INCLUDE A \$100 APPLICATION FEE, \$50 FOR TEXTBOOKS AND \$5,850 FOR TUITION TOTALING \$6000.

399 FOOD SERVICE TRANSFER PROGRAMS:

- - - - - 27139 AUSTIN COMMUNITY COLLEGE
- - - - - 27140 BRAINERD COMMUNITY COLLEGE
- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27145 WILLMAR COMMUNITY COLLEGE
- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE
- - - - - 27147 VERMILION COMMUNITY COLLEGE
- - - - - 27148 ROCHESTER COMMUNITY COLLEGE
- - - - - 27149 NORTHLAND COMMUNITY COLLEGE
- - - - - 27150 MESABI COMMUNITY COLLEGE
- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE
- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE
- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE
- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE
- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE
- - - - - 27157 INVER HILLS COMMUNITY COLLEGE
- - - - - 81003 UNIVERSITY OF MINNESOTA (MORRIS)

Law programs intend to prepare people as licensed attorneys and for other careers requiring a legal background. Law involves the study of the official rules and regulations of our society and the procedures involved in making and enforcing those rules.

Law is a three year graduate degree program leading to a Doctor of Jurisprudence degree. Law programs are offered at many colleges and universities. Law students must pass a state Bar Association Exam in order to practice law. (See PREP 8432.)

Legal assistance programs (also called paralegal studies) intend to prepare people to assist lawyers in the performance of legal services. Legal assistance students study how to collect evidence, prepare documents, and conduct legal research.

The length of legal assistance programs varies from one- or two-year certificate programs and two-year associate degree programs, to four-year bachelor's degree programs. Programs are offered at community colleges, at four-year colleges and universities, and at private commercial schools.

---PROGRAM ADMISSION: A bachelor's degree is required for admission to law schools accredited by the American Bar Association. There are no required pre-law majors for law school applicants. The following subjects have been shown to be valuable to pre-law students: English, political science, philosophy, business administration, economics, and American history. Most law schools prefer students with a broad liberal arts background.

Competition is keen for the limited enrollment slots in law schools. Prerequisites for law school admission are a strong undergraduate background and high scores on the Law School Admissions Test (LSAT). The four hour standardized test is given several times during the year. Most law schools prefer applicants to take the test in October or December, prior to the year applicants plan to enter law school. Most law schools have specific course work and admission requirements which vary among schools. For more information on the LSAT, contact the Law School Admission Services (LSAS), Box 2000, Newtown, PA 18940.

Admission requirements for legal assistance programs vary. Some programs require college degrees while others accept a high school diploma or it's equivalent. Applicants should contact the law school or legal assistance program of their choice to learn about educational requirements, tests, interviews, recommendations, and deadlines.

---TYPICAL COURSE WORK: Instruction in law consists of lectures, class discussion, considerable outside reading of technical materials, preparation of research papers, and practicing courtroom procedures. Course work varies but usually includes emphasis on the principles and history of law, preparation of legal documents, understanding court practice and procedure, and a mastery of the methods involved in legal reasoning. Students take law courses such as:

Criminal Law and Procedure	Equity
Constitutional Law	Property
Legal Ethics	Tax Laws
Corporations	Contracts
Uniform Commercial Code	Evidence
Legislative and Administrative Procedures	Torts

Law is a way of thinking as well as a subject to be mastered. Course work

is usually designed to develop analyzing and reasoning skills. These skills are crucial to successful law school performance.

Instruction methods for legal assistance programs include lectures, outside reading, class discussion, and preparation of research papers. Legal assistance programs emphasize the practical application of the skills of legal reasoning and analysis. Certificate programs may require certain core courses; associate and bachelor's degree programs usually require general liberal arts courses as well as specific law related courses. Course work varies but usually includes the following core courses:

- Introduction to Law and Ethics
- Law Office System and Management
- Interviewing and Investigative Techniques
- Legal Research and Writing

Other course work (which may be required or elective, depending on the program) may include the following courses:

Litigation	Real Estate Law
Taxation	Business Law
Criminal Law	Constitutional Law
Corporate Law	Probate

---GRADUATION REQUIREMENTS: Requirements vary. See college catalogs for more information.

---THINGS TO KNOW: Some law programs offer classes during the evening. Twenty percent of the nation's law students are enrolled in part-time evening programs. Part-time day law programs are rare.

Persons interested in taking correspondence law programs should check with their State Bar Association to determine if they will be eligible to take the Bar Exam after finishing the correspondence program.

Non-degree legal assistance programs are offered by continuing legal education associations, legal aid offices, governmental agencies, and by law firms. For a list of non-degree legal assistance programs, contact the State Bar Association.

Many legal assistance programs are offered part-time, with day and/or evening classes. The length and content of legal assistance programs vary. Students should compare programs to see which programs best meet their occupational goals.

---RELATED PROGRAMS: PROG 586 Political Science, 158 Secretarial Studies and Office Administration, 591 Philosophy.

---DIRECTLY RELATED OCCUPATIONS: DESC 8432 Lawyers, 8456 Paralegals Assistants, 8419 Judges.

---REFERENCES:

- Prelaw Handbook
- Law School Admission Services
- Box 944
- Princeton, NJ 08540

For legal assistance programs:

- Legal Assistant Education and Utilization
- American Bar Association, Committee on Legal Assistants
- 155 East 60th Street
- Chicago, IL 60637

Other References:

Board of Law Examiners
Room 200A
Minnesota State Bank Building
Plato & South Robert Street
St. Paul, Minnesota 55107

State Court Administrators Office
40 North Milton Street, Room 300
St. Paul, Minnesota 55104

Lawyers Board of Professional Responsibility
4th Floor Space Center Building
444 Lafayette Road
St. Paul, Minnesota 55101

CIPS: 22.

SCHOOLS:

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'LEGAL ASSISTANT' PROGRAM IS DESIGNED FOR STUDENTS WHO ARE INTERESTED IN WORKING AS ASSISTANTS TO LAWYERS OR LAW ADMINISTRATORS. STUDENTS ARE GIVEN A BACKGROUND IN RESEARCH PROCEDURES, LEGAL FORMS, AND OFFICE MAN-AGEMENT. THE PROGRAM ALSO OFFERS AN UNDERSTANDING OF THE LAWYER'S ROLE IN SOCIETY, LEGAL INSTITUTIONS, AND A GENERAL UNDERSTANDING OF MANY FIELDS OF LAW.

--- DEGREES OFFERED: GRADUATES MAY EARN AN ASSOCIATE IN APPLIED SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THE PROGRAM IS 2 YEARS LONG.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'LEGAL ASSISTANT' PROGRAM PREPARES STUDENTS TO ASSUME THE GENERAL RESPONSIBILITIES OF LEGAL ASSISTANTS IN LAW OFFICES AND TO PROVIDE CONTINUING EDUCATION FOR THOSE PRESENTLY EMPLOYED IN LAW OFFICES. STUDENTS COMPLETE GENERAL EDUCATION COURSES AS WELL AS COURSES DIRECTLY RELATED TO THE LEGAL ASSISTANT CAREER.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: THREE TYPES OF LAW PROGRAMS ARE OFFERED. GENERAL COLLEGE OFFERS A 2 YEAR 'LEGAL ASSISTANT' PROGRAM AND A 2 YEAR 'LEGAL ADMINISTRATOR' PROGRAM WHICH FOLLOWS COMPLETION OF THE ASSISTANT PROGRAM. BOTH PREPARE STUDENTS FOR WORK IN LAW OFFICES OR LEGAL SETTINGS UNDER THE SUPERVISION OF LAWYERS. THE 'LAW SCHOOL' PROGRAM OF THREE YEARS PREPARES STUDENTS TO TAKE THE BAR EXAM AND PRACTICE LAW. STUDENTS ENTER THIS PROGRAM AFTER HAVING EARNED A 4-YEAR DEGREE. ADMISSION IS LIMITED AND SELECTIVE.

--- DEGREES OFFERED: GRADUATES OF THE LEGAL ASSISTANT PROGRAM RECEIVE AN ASSOCIATE IN ARTS DEGREE AND A CERTIFICATE. THE CERTIFICATE MAY BE EARNED THROUGH EXTENSION. GRADUATES OF THE ADMINISTRATOR PROGRAM RECEIVE THE BACHELOR OF APPLIED STUDIES DEGREE AND A CERTIFICATE. LAW SCHOOL GRADUATES

RECEIVE THE JURIS DOCTOR DEGREE. A MASTER OF ARTS DEGREE IN AMERICAN LEGAL INSTITUTIONS IS ALSO AVAILABLE FOR STUDENTS WHO HAVE EARNED LAW DEGREES IN OTHER COUNTRIES.

English and literature programs are designed to teach reading and writing skills, and to put students in touch with what has been thought and written in the English language. Many English majors take courses to be certified as primary or secondary school teachers; others go on to graduate school, hoping to become teachers in colleges or universities. Still others who plan to go on in fields such as law, journalism, and business find the analytical and writing skills attained as a literature major invaluable. Nearly all four year colleges and universities offer bachelor's degree programs in English and/or specialties such as comparative literature and creative writing. Many also offer master's degree and doctoral programs. Most community colleges offer the first two years of English degree requirements, which may be transferred to four year institutions.

---PROGRAM ADMISSION: A high school diploma is required for admission to most colleges and universities. Prospective applicants should consult college catalogs for more specific requirements.

---TYPICAL COURSE WORK: Most English and literature courses include some lecture, followed by discussion. Students are called upon to do extensive reading of literature and literary criticism, followed by the writing of critical essays. Most programs include courses in the following:

English Composition	Drama
Poetry	Expository Prose
Fiction	Literary Criticism

Courses are also offered in individual writers, such as Chaucer, Milton, Shakespeare, and Blake. Related academic areas such as history and philosophy are also usually included in course work.

---GRADUATION REQUIREMENTS: Requirements vary. Four year programs usually require two or more years of a foreign language.

---THINGS TO KNOW: Class size in English departments is usually smaller than average. Students pursuing graduate degrees may be able to take advantage of a large number of teaching assistantships.

Some students prepare to be technical writers in computer-related fields by taking introductory programming courses.

---RELATED PROGRAMS: PROG 448 Liberal Studies, 443 Speech, 316 Dramatic Arts, 236 Secondary Education, 193 Journalism and Communications.

---DIRECTLY RELATED OCCUPATIONS: DESC 9832 Literary Writers,

ASSOCIATED OCCUPATIONS: DESC 8453 Elementary Teachers, 8457 Secondary Teachers, 8454 University and College Teachers, and 4769 Technical Writers.

CIPS: 23. (except 23.09 and 23.10)

SCHOOLS:

- - - - - 84016 COLLEGE OF SAINT BENEDICT

--- OBJECTIVES OF THE PROGRAM: THE 4 YEAR 'ENGLISH' PROGRAM OFFERS BOTH LIBERAL AND LITERARY STUDY AND TRAINING. THE PROGRAM IS DESIGNED FOR STUDENTS WHO WISH TO PREPARE EITHER FOR A WIDE RANGE OF CAREERS SUCH AS MANAGEMENT AND COMMUNICATIONS OR FOR GRADUATE SCHOOL IN SEVERAL DISCIPLINES SUCH AS LAW AND JOURNALISM. COURSES INCLUDE COMPOSITION, ENGLISH LITERATURE, WORLD LITERATURE IN TRANSLATION, AMERICAN LITERATURE, AND LINGUISTICS. STUDENTS WHO WISH TO BECOME TEACHERS MUST ALSO COMPLETE THE SECONDARY EDUCATION REQUIREMENTS.

--- DEGREES OFFERED: AN ASSOCIATE OF ARTS DEGREE IS OFFERED FOR THE 2 YEAR PROGRAM WHILE A BACHELOR OF ARTS DEGREE IS OFFERED IN THE 4 YEAR PROGRAM.

Liberal studies programs are designed to provide a broad liberal arts and science education that cuts across the traditional subjects in the humanities, the sciences, and the social sciences. The widest possible variety of subject matter allows liberal studies majors to tailor a course of study best suited to their individual needs and abilities. Liberal studies programs have no clear occupational objective, however, most programs allow students to specialize in areas that do have occupational objectives. In addition many students take education courses in order to be certified as teachers. Others use liberal studies as a background for graduate work in a wide variety of related subjects, such as political science, sociology, business administration, and law.

Many four year colleges and universities offer bachelor's degree programs in liberal studies. Most community colleges offer two-year programs which may be transferred to a four year college or university.

---PROGRAM ADMISSION: A high school diploma or its equivalent is normally required for admission to undergraduate programs.

---TYPICAL COURSE WORK: Liberal studies majors are required to take a core of general requirements in the arts, sciences, and social sciences. These courses usually include:

English Composition	Mathematics
Humanities	Physics
Sociology	Chemistry
Psychology	Biology

The rest of the course work varies greatly, depending on the emphasis desired by the student. Instruction consists of lectures and class discussion, reading and research, and the writing of essays and research papers. Depending on the emphasis chosen, students may also be required to do extensive work in laboratories, studios, or in the field.

---GRADUATION REQUIREMENTS: Requirements vary with school and emphasis chosen. See college catalogs for detailed information.

---THINGS TO KNOW: Liberal studies students are advised to work closely with available advisors and career counselors.

---RELATED PROGRAMS: All of the liberal arts and science programs are related to the liberal studies program.

---ASSOCIATED OCCUPATIONS: DESC 8453 Elementary Teachers, 8457 Secondary Teachers.

CIPS: 24.
30.

SCHOOLS:

- - - - - 26071 MANKATO STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: AN 'OPEN STUDIES' MAJOR (ASSOCIATE OF SCIENCE DEGREE) REQUIRES 96 CREDITS. THERE ARE NO SPECIFIC COURSE REQUIREMENTS. A LIBERAL STUDIES MAJOR (ASSOCIATE OF ARTS DEGREE) ALSO REQUIRES 96 CREDITS, HOWEVER, 67 GENERAL EDUCATION CREDITS ARE REQUIRED. ALL OPEN STUDIES MAJOR ALLOWS THE STUDENT TO ACQUIRE A LIBERAL ARTS DEGREE WITHOUT CONFINEMENT TO THE REQUIREMENTS OF A PARTICULAR DISCIPLINE. NO SPECIFIC COURSE REQUIREMENTS OR PREREQUISITES ARE MET. STUDENTS INTERESTED IN THIS DEGREE PROGRAM SHOULD CONSULT WITH THE COORDINATOR OF OPEN STUDIES. PROGRAM REQUIRES THE COMPLETION OF 92 CREDITS.

THE NON-TEACHING MAJOR IN 'HUMANITIES' CONSISTS OF INTERDISCIPLINARY COURSE WORK WITH EXPOSURE TO THE RELATED DISCIPLINES OF ART, HISTORY, LITERATURE, MUSIC AND PHILOSOPHY. STUDENTS TYPICALLY DESIGN THEIR OWN CURRICULUM TO SUIT THEIR INTERESTS WITHIN THE BROAD SPECTRUM OF LIBERAL ARTS.

THE MASTER OF SCIENCE DEGREE PROGRAM IN 'CONTINUING STUDIES' IS DESIGNED TO SERVE THOSE STUDENTS WHOSE PERSONAL/EDUCATIONAL/CAREER GOALS REQUIRE PROGRAMS WHICH DO NOT MEET THE TRADITIONAL REQUIREMENTS OF A MAJOR AREA OF EMPHASIS. STUDENTS DESIGN THEIR OWN CURRICULUM CONSISTING OF 51 CREDITS TO MEET THEIR OWN NEEDS.

--- DEGREES OFFERED: AN ASSOCIATE OF SCIENCE, ASSOCIATE OF ARTS, BACHELOR OF ARTS, A BACHELOR OF SCIENCE, AND MASTER OF SCIENCE DEGREES ARE OFFERED.

- - - - - 26072 MOORHEAD STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'LIBERAL ARTS' PROGRAM BUILDS, EXTENDS, AND ENLARGES EDUCATION PREVIOUSLY ATTAINED. STUDENTS INTERESTED IN THE SOCIAL SCIENCES OR HUMANITIES WOULD CHOOSE COURSES ACCORDINGLY. THE PROGRAM IS CHARACTERIZED BY MINIMUM REQUIREMENTS IN AREAS SUCH AS SCIENCE. BECAUSE THE PROGRAM IS NOT STATIC, ITS REQUIREMENTS MAY VARY FOR STUDENTS IN DIFFERENT ENTERING CLASSES. THE TWO YEAR ASSOCIATE IN ARTS PROGRAM INCLUDES AT LEAST 64 CREDITS IN LIBERAL ART ACCORDING TO BACCALAUREATE DISTRIBUTION REQUIREMENTS.

--- DEGREES OFFERED: AN ASSOCIATE OF ARTS AND A MASTER OF ART DEGREE IN THE FIELD OF LIBERAL ARTS ARE OFFERED.

- - - - - 26074 WINONA STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: 'GENERAL LIBERAL ARTS AND SCIENCE' CANDIDATES MUST COMPLETE 12 CREDITS OF BASIC REQUIREMENTS CONSISTING OF ENGLISH AND PHYSICAL EDUCATION PLUS FOUR STUDY AREAS (HUMANITIES, NATURAL SCIENCES, SOCIAL SCIENCES, AND ELECTIVE) IN THIS TWO YEAR PROGRAM. THE 'INDIVIDUALIZED STUDY' PROGRAM LEADS TO A NON-SPECIFIC MAJOR WITH A BACHELOR OF ARTS DEGREE. THE PROGRAM SHOULD NOT BE USED IN PREPARATION FOR GRADUATE SCHOOL. EXCEPT FOR A 56 CREDIT GENERAL EDUCATION COMPONENT IN ENGLISH, PHYSICAL EDUCATION, HUMANITIES, NATURAL SCIENCE, SOCIAL SCIENCE, THE STUDENT DESIGNS THEIR MAJOR OR TRANSFERS IN COMPLETE VOC-TECH PROGRAM.

--- DEGREES OFFERED: STUDENTS OBTAIN A GENERAL ASSOCIATE IN ARTS DEGREE OR A BACHELOR OF ARTS DEGREE.

- - - - - 27139 AUSTIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: STUDENTS WHO ARE SEEKING AN ASSOCIATE IN ARTS DEGREE MAY CHOOSE THEIR ELECTIVE CREDITS FROM THE 'SOCIAL SCIENCES' OR 'SCIENCES' OR 'HUMANITIES'. THIS PROGRAM IS DESIGNED FOR STUDENTS WHO PLAN TO TRANSFER TO A FOUR YEAR COLLEGE. STUDENTS ARE REQUIRED TO COMPLETE COURSES IN COMMUNICATIONS, PEOPLE AND SOCIETY, MATH, SCIENCE, HUMANITIES

AND PHYSICAL EDUCATION. THE COLLEGE IS ALSO OPEN TO STUDENTS WHO WISH TO TAKE A VARIETY OF COURSES IN ORDER TO GAIN A GENERAL EDUCATION BUT DO NOT PLAN TO TRANSFER.

--- DEGREES OFFERED: A DIPLOMA OR AN ASSOCIATE IN ARTS DEGREE ARE OFFERED.

--- LENGTH OF PROGRAM: BOTH THE DIPLOMA AND THE DEGREE PROGRAM ARE TWO YEARS LONG.

- - - - - 27143 HIBBING COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: STUDENTS IN THE 'ASSOCIATE IN ARTS DEGREE' PROGRAM MAY CHOOSE ELECTIVES FROM THE SOCIAL SCIENCES SUCH AS: ANTHROPOLOGY, ECONOMICS, HISTORY, SOCIOLOGY, PSYCHOLOGY, POLITICAL SCIENCE, GEOGRAPHY, OR HISTORY. STUDENTS IN THE 'ASSOCIATE IN SCIENCE DEGREE' PROGRAM MAY CHOOSE A MINIMUM OF 45 CREDITS FROM ANY OF THE FOLLOWING SCIENCES: BIOLOGY, CHEMISTRY, MATHEMATICS, PHYSICS, ASTRONOMY, EARTH SCIENCE AND ENVIRONMENTAL SCIENCE. STUDENTS IN THE 'ASSOCIATE OF ARTS DEGREE' PROGRAM MAY CHOOSE ELECTIVES FROM THE HUMANITIES SUCH AS: ART, INTRODUCTION TO THEATRE, AMERICAN AND ENGLISH LITERATURE, MUSIC, SPEECH, PHILOSOPHY, PHOTOGRAPHY, JOURNALISM, AND T.V. PRODUCTION.

--- DEGREES OFFERED: AN ASSOCIATE IN ARTS OR SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE 2 YEARS LONG.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 27144 ITASCA COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: A 'GENERAL EDUCATION' PROGRAM IS OFFERED FOR STUDENTS SEEKING A TWO YEAR DEGREE. STUDENTS COMPLETE REQUIRED COURSES IN ENGLISH, SOCIAL SCIENCE, SCIENCE, PSYCHOLOGY, MATHEMATICS, HUMANITIES, AND PHYSICAL EDUCATION. THE STUDENT CHOOSES ELECTIVE COURSES TO MEET THE TOTAL CREDIT REQUIREMENTS FOR GRADUATION.

--- DEGREES OFFERED: AN ASSOCIATE OF ARTS DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 27145 WILLMAR COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: STUDENTS WHO PREFER THE 'SOCIAL SCIENCES' OR 'HUMANITIES' MAY CHOOSE THEIR COURSES ACCORDINGLY IN AN AREA OF INTEREST.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THESE ARE TWO YEAR PROGRAMS.

- - - - - 27148 ROCHESTER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'GENERAL PROGRAM' IS DESIGNED FOR STUDENTS WHO DESIRE A GENERAL EDUCATION. THOSE INTERESTED IN THE SOCIAL SCIENCES CHOOSE ELECTIVES IN THE ANALYSIS OF HUMAN BEHAVIOR AND INSTITUTIONS AND THE DEVELOPMENT OF CIVILIZATION. THOSE INTERESTED IN THE 'SCIENCES' CHOOSE ELECTIVES ACCORDINGLY. THE FOLLOWING AREAS ARE OFFERED: BIOLOGICAL SCIENCES, CHEMISTRY, EARTH SCIENCES, AND PHYSICS. THOSE INTERESTED IN HUMANITIES CHOOSE ELECTIVES IN LITERATURE AND THE ARTS.

--- DEGREES OFFERED: AN ASSOCIATE IN ARTS DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE GENERAL PROGRAM IS 2 YEARS LONG.

- - - - - 27149 NORTHLAND COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: A 'GENERAL STUDIES' PROGRAM IS OFFERED FOR STUDENTS WHO WISH TO TAKE COURSES FOR THEIR OWN ENRICHMENT AND INTEREST. THEY MAY ALSO EARN A DEGREE IN GENERAL STUDIES BY DEVELOPING THEIR OWN PROGRAM RATHER THAN FOLLOWING A PRESCRIBED CAREER OR TRANSFER PROGRAM. STUDENTS WHO ARE INTERESTED IN THE 'SOCIAL SCIENCES', 'SCIENCES' OR 'HUMANITIES' WILL BE ABLE TO TAKE MANY COURSES IN RELATED AREAS.

--- DEGREES OFFERED: AN ASSOCIATE IN ARTS DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE DEGREE PROGRAM IS 2 YEARS LONG.

- - - - - 27150 MESABI COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: STUDENTS MAY DESIGN A 'GENERAL STUDIES' CURRICULUM IN THE 'SOCIAL SCIENCES', 'SCIENCES' OR 'HUMANITIES' AREA, EITHER IN PREPARATION FOR TRANSFER TO A FOUR YEAR COLLEGE OR TO EXPLORE THEIR OWN EDUCATIONAL INTERESTS.

--- DEGREES OFFERED: STUDENTS MAY RECEIVE AN ASSOCIATE IN ARTS DEGREE.

--- LENGTH OF PROGRAM: ASSOCIATE DEGREE PROGRAMS ARE 2 YEARS LONG.

- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: STUDENTS MAY PURSUE A GENERAL COURSE OF STUDY IN THE 'SOCIAL SCIENCES', 'SCIENCES' OR 'HUMANITIES' EITHER IN PREPARATION FOR TRANSFER TO A FOUR YEAR COLLEGE OR FOR SELF IMPROVEMENT. STUDENTS WHO ARE SEEKING AN ASSOCIATE IN ARTS DEGREE MUST COMPLETE SPECIFIC REQUIREMENTS IN DIFFERENT AREAS OF STUDY IN ADDITION TO SOCIAL SCIENCE, SCIENCE OR HUMANITIES ELECTIVES.

--- DEGREES OFFERED: STUDENTS MAY RECEIVE THE ASSOCIATE IN ARTS DEGREE.

--- LENGTH OF PROGRAM: THIS ASSOCIATE DEGREE PROGRAM IS 2 YEARS LONG.

- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THIS PROGRAM IS INTENDED PRIMARILY TO CONSTITUTE THE FIRST TWO YEARS OF A BACCALAUREATE DEGREE PROGRAM FOR STUDENTS WHO PLAN TO TRANSFER TO A FOUR YEAR INSTITUTION. STUDENTS MUST FULFILL A 60 CREDIT GENERAL EDUCATION REQUIREMENT DISTRIBUTED AMONG THE DEPARTMENTS OF BEHAVIORAL SCIENCES, ENGLISH, HUMANITIES, MATHEMATICS, PHYSICAL EDUCATION, SCIENCES AND SOCIAL SCIENCES.

--- DEGREES OFFERED: STUDENTS COMPLETING THIS PROGRAM EARN AN ASSOCIATE IN ARTS DEGREE.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: STUDENTS WHO ARE PURSUING A TWO YEAR DEGREE MAY CHOOSE THEIR ELECTIVE COURSES FROM THE SOCIAL SCIENCES, SCIENCES, OR HUMANITIES. THEY MAY DESIGN EITHER A 'GENERAL EDUCATION' PROGRAM OR A PROGRAM WHICH WILL TRANSFER TO A FOUR YEAR SCHOOL. ALL STUDENTS SEEKING AN ASSOCIATE IN ARTS DEGREE MUST ALSO TAKE COURSES IN ENGLISH, HEALTH AND PHYSICAL EDUCATION, FINE ARTS, AND NATURAL SCIENCE OR SOCIAL SCIENCE.

--- DEGREES OFFERED: STUDENTS WHO COMPLETE THE PROGRAM MAY RECEIVE AN ASSOCIATE IN ARTS DEGREE.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 27156 NORMANDALE COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: STUDENTS MAY CHOOSE TO FOLLOW A GENERAL 'SOCIAL SCIENCE' OR 'HUMANITIES' CURRICULUM BY COMPLETING THE LIBERAL EDUCATION REQUIREMENTS AND TAKING ELECTIVE COURSES IN THEIR SPECIAL AREA OF INTEREST. THE LIBERAL EDUCATION CURRICULUM PROVIDES A TOTAL LEARNING EXPERIENCE RATHER THAN SPECIFIC CAREER PREPARATION.

--- DEGREES OFFERED: AN ASSOCIATE IN ARTS DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE LIBERAL EDUCATION CURRICULUM IS A TWO YEAR PROGRAM.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: STUDENTS MAY CHOOSE TO FOLLOW A GENERAL

COURSE OF STUDY IN 'SOCIAL SCIENCE', 'SCIENCE' OR 'HUMANITIES' EITHER TO PREPARE FOR TRANSFER TO A FOUR YEAR PROGRAM OR TO MEET THEIR OWN EDUCATIONAL NEEDS. STUDENTS MUST COMPLETE REQUIRED COURSES IN ENGLISH, FINE ARTS, SCIENCE, MATH, PHYSICAL EDUCATION, THE SOCIAL SCIENCES, AND SPEECH. THEY MAY CHOOSE ELECTIVE COURSES IN THEIR OWN AREA OF INTEREST.

--- DEGREES OFFERED: STUDENTS MAY EARN AN ASSOCIATE DEGREE IN LIBERAL ARTS.

--- LENGTH OF PROGRAM: ALL ASSOCIATE DEGREE PROGRAMS ARE 2 YEARS LONG.

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: THE GENERAL COLLEGE ASSOCIATE IN ARTS DEGREE PROGRAM ENABLES STUDENTS TO ENHANCE THEIR CAREER INTERESTS AND RECEIVE A BROAD GENERAL EDUCATION. THE FOUR YEAR BACHELOR OF 'GENERAL STUDIES' DEGREE PROGRAM ENABLES STUDENTS TO SELECT A CORE OF DIVERSE COURSES THAT MAY INCLUDE INDIVIDUAL STUDY AND OTHER PROJECTS, BASED ON A GENERAL TOPIC OR THEME OF THEIR CHOICE. THE FOUR YEAR BACHELOR OF 'APPLIED STUDIES' DEGREE PROGRAM IS AIMED AT A STUDENT'S PARTICULAR OCCUPATION, PROFESSION, OR SPECIAL SKILL. STUDENTS WHO HAVE, OR ARE IN THE PROCESS OF COMPLETING, A RECOGNIZED CERTIFICATE OR WHO HAVE DOCUMENTED EXPERTISE IN A SPECIALIZED FIELD MAY DESIGN A PROGRAM OF COURSES AND OTHER LEARNING EXPERIENCES TO DEVELOP ATTITUDES, SKILLS, KNOWLEDGE, AND COMPETENCE NEEDED IN THEIR PARTICULAR AREA. THE 'INDIVIDUALLY DESIGNED INTERDEPARTMENTAL' MAJOR ALLOWS STUDENTS IN THE COLLEGE OF LIBERAL ARTS TO FULFILL THE MAJOR PROGRAM REQUIREMENT FOR THE BACHELOR OF ARTS BY COMPLETING AN INTERDEPARTMENTAL PROGRAM OF COURSE WORK CENTERED AROUND A THEME OF THEIR OWN CHOOSING. THE 'INDIVIDUALLY DESIGNED PROGRAM' IN THE COLLEGE OF BIOLOGICAL SCIENCES IS DESIGNED FOR STUDENTS WITH STRONG INTERESTS IN BIOLOGY WHOSE INTERESTS AND GOALS CANNOT BE MET BY A TRADITIONAL BIOLOGICAL SCIENCES MAJOR. THE 'BACHELOR OF INDIVIDUALIZED STUDIES' PROGRAM SERVES STUDENTS FOR WHOM B.A. AND B.S. PROGRAMS IN THE COLLEGE OF LIBERAL ARTS ARE NOT APPROPRIATE FOR MANY KINDS OF REASONS. THE ADDED FLEXIBILITY GIVES STUDENTS A CHANCE TO TAKE COURSES OUTSIDE OF CLA (UP TO 40 CREDITS) AND TO DESIGN THEIR OWN PROGRAMS.

'INTERCOLLEGE' PROGRAM OFFERS STUDENTS A CREDIT-BASED INDIVIDUALIZED BACCALAUREATE DEGREE PROGRAM THAT DRAWS UPON THE CURRICULAR OFFERINGS AND OTHER EDUCATIONAL RESOURCES OF THE ENTIRE UNIVERSITY COMMUNITY AND INCORPORATES BOTH DAY SCHOOL AND EXTENSION REGISTRATION. THE 'UNIVERSITY WITHOUT WALLS' SERVES SELF-DIRECTED STUDENTS WITH CLEAR EDUCATIONAL GOALS WHO NEED FLEXIBILITY IN THE DESIGN AND IMPLEMENTATION OF AN INDIVIDUALIZED B.A. OR B.S. DEGREE PROGRAM.

MANY TYPES OF 'HUMANITIES' PROGRAMS ARE OFFERED. SOME ARE DESIGNED BY THE UNIVERSITY ESPECIALLY TO PROVIDE A BACKGROUND IN THE HUMANITIES. OTHERS ARE INDIVIDUALLY DESIGNED PROGRAMS. THE 'GENERAL STUDIES' PROGRAM IS BASED ON A PROBLEM, ISSUE, OR THEME. STUDENTS COMBINE COURSES FROM THE SOCIAL SCIENCES, NATURAL SCIENCES, COMMUNICATION, AND HUMANITIES IN THEIR PROGRAMS OF STUDY. THE 'APPLIED STUDIES' PROGRAM HAS A CAREER ORIENTATION. STUDENTS WHO HAVE COMPLETED 90 COLLEGE CREDITS OR THE EQUIVALENT IN COLLEGE-LEVEL WORK AND WHO HAVE DOCUMENTED EXPERTISE IN A SPECIALIZED FIELD SUCH AS NURSING, ELECTRONICS, OR RADIOLOGIC TECHNOLOGY MAY DESIGN A PROGRAM OF COURSES AND OTHER LEARNING EXPERIENCES INTENDED TO EXTEND THEIR COMPETENCIES IN THAT FIELD.

--- DEGREES OFFERED: THE APPLIED STUDIES PROGRAM LEADS TO THE BACHELOR OF APPLIED STUDIES DEGREE AND THE GENERAL STUDIES PROGRAM LEADS TO THE

BACHELOR OF GENERAL STUDIES DEGREE. C.L.A.'S INTERDEPARTMENTAL MAJOR LEADS TO THE BACHELOR OF ARTS DEGREE. THE UNIVERSITY COLLEGE PROGRAMS MAY LEAD TO EITHER THE B.A. OR B.S. DEGREE. THE C.L.A. HUMANITIES, WOMEN STUDIES, AND INTERDEPARTMENTAL MAJORS LEAD TO BACHELOR OF ARTS DEGREES. THE C.L.A. LIBERAL ARTS PROGRAM LEADS TO THE ASSOCIATE IN LIBERAL ARTS. THE G.C. PROGRAM LEADS TO THE ASSOCIATE IN ARTS. G.C.'S APPLIED STUDIES PROGRAM LEADS TO THE BACHELOR OF APPLIED STUDIES. THE GENERAL STUDIES PROGRAM LEADS TO THE BACHELOR OF GENERAL STUDIES DEGREE. THE UNIVERSITY COLLEGE PROGRAMS LEAD TO EITHER THE B.A. OR THE BACHELOR OF SCIENCE. THE ONE YEAR EXTENSION PROGRAMS OFFER CERTIFICATES.

- - - - - 81004 UNIVERSITY OF MINNESOTA - CROOKSTON TECHNICAL COLLEGE
--- OBJECTIVES OF THE PROGRAM: UMC OFFERS A TWO YEAR PROGRAM IN 'GENERAL' OR 'LIBERAL STUDIES'. A MINIMUM OF FIFTY PERCENT OF THE COURSEWORK IS IN THE ARTS AND SCIENCES. THE CURRICULUM IS DESIGNED FOR STUDENTS INTENDING TO CONTINUE BACCALAUREATE STUDIES AT A SENIOR INSTITUTION, HOWEVER, SOME STUDENTS MAY DESIRE TO UTILIZE THIS CURRICULUM IF THEY DO NOT HAVE A SPECIFIC PROFESSIONAL OR TECHNICAL CAREER SPECIALIZATION IN MIND.
--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE DEGREE IS OFFERED.
--- LENGTH OF PROGRAM: THIS IS A TWO YEAR PROGRAM.

- - - - - 83001 BETHANY LUTHERAN JUNIOR COLLEGE
--- OBJECTIVES OF THE PROGRAM: THE 'GENERAL EDUCATION' PROGRAM IS DESIGNED FOR STUDENTS WHO INTEND TO TRANSFER TO FOUR YEAR COLLEGES. THE BASIC REQUIREMENTS INCLUDE COURSE WORK IN COMMUNICATIONS, SOCIAL SCIENCE, HUMANITIES, MATH, SCIENCE, RELIGION, AND PHYSICAL EDUCATION. STUDENTS MAY FOLLOW A GENERAL SOCIAL SCIENCE CURRICULUM CHOOSING THEIR ELECTIVES FROM ECONOMICS, GEOGRAPHY, HISTORY, POLITICAL SCIENCE, PSYCHOLOGY, AND SOCIOLOGY OR THE NATURAL SCIENCE FIELDS AND MATHEMATICS. STUDENTS MAY FOLLOW A GENERAL HUMANITIES CURRICULUM, CHOOSING THEIR ELECTIVES FROM ENGLISH LITERATURE, FOREIGN LANGUAGES, MUSIC AND ART.
--- DEGREES OFFERED: STUDENTS MAY EARN EITHER THE ASSOCIATE IN ARTS DEGREE OR A JUNIOR COLLEGE DIPLOMA.
--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 83002 CROSIER SEMINARY JUNIOR COLLEGE
--- OBJECTIVES OF THE PROGRAM: ALL STUDENTS COMPLETE THE 'PROGRAM OF STUDIES' WHICH IS A LIBERAL ARTS CURRICULUM. COURSES ARE REQUIRED IN ENGLISH COMPOSITION, SPEECH, MATH, NATURAL SCIENCE, PHILOSOPHY, THEOLOGY, PSYCHOLOGY, AND SOCIOLOGY. STUDENTS MUST ALSO ACQUIRE COMPETENCY IN LATIN. IN ADDITION TO REQUIRED COURSES, STUDENTS MAY CHOOSE ELECTIVES. THOSE WHO ARE INTERESTED IN THE SOCIAL SCIENCES MAY CHOOSE ADVANCED OR SPECIAL CONTENT COURSES IN THOSE AREAS. THOSE WHO ARE INTERESTED IN THE HUMANITIES MAY CHOOSE COURSES IN COMMUNICATIONS, LANGUAGES, HISTORY, THE FINE ARTS OR LITERATURE. THOSE INTERESTED IN SCIENCE MAY CHOOSE THEIR ELECTIVES FROM THE MATH AND SCIENCE AREAS.
--- DEGREES OFFERED: GRADUATES RECEIVE THE ASSOCIATE OF ARTS IN THE HUMANITIES DEGREE.
--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 83003 GOLDEN VALLEY LUTHERAN COLLEGE
--- OBJECTIVES OF THE PROGRAM: THE 'GENERAL ARTS CURRICULUM' IS DESIGNED TO MEET THE NORMAL GENERAL EDUCATION REQUIREMENTS FOR A BACHELOR'S DEGREE. THE PROGRAM IS RECOMMENDED FOR STUDENTS WHO PLAN TO TRANSFER TO A 4-YEAR SCHOOL. THE 'BASIC SCIENCE' CURRICULUM IS SUITABLE FOR STUDENTS WHO PLAN

TO TRANSFER TO A 4-YEAR SCIENCE OR TECHNOLOGY PROGRAM. THE REQUIRED AREAS OF STUDY ARE: BIBLICAL STUDIES, ENGLISH, SPEECH, SOCIAL SCIENCE, NATURAL SCIENCE, CREATIVE ARTS, PHYSICAL EDUCATION, AND FOREIGN LANGUAGES. STUDENTS ALSO TAKE COURSES IN A SPECIAL AREA OF INTEREST, SUCH AS THE SOCIAL SCIENCES, TO COMPLETE THIS PROGRAM.

--- DEGREES OFFERED: COMPLETION OF THIS PROGRAM LEADS TO THE ASSOCIATE IN ARTS DEGREE.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 84013 NORTH CENTRAL BIBLE COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE STANDARD 'GENERAL EDUCATION ARTS AND SCIENCES' 2 YEAR PROGRAM PREPARES STUDENTS TO TRANSFER TO SENIOR COLLEGES AND UNIVERSITIES OR CONTINUE IN THE 4 YEAR PROGRAMS. SUBJECT AREAS INCLUDE: ENGLISH, SPEECH, PSYCHOLOGY SOCIOLOGY, HISTORY, HUMANITIES, AND MUSIC, AS WELL AS BIBLICAL STUDIES.

--- DEGREES OFFERED: AN ASSOCIATE IN ARTS DEGREE IS OFFERED.

- - - - - 84014 NORTHWESTERN COLLEGE

--- OBJECTIVES OF THE PROGRAM: A 2 YEAR 'GENERAL EDUCATION' PROGRAM IS OFFERED. THIS PROGRAM IS DESIGNED AS A BASIS FOR TRANSFERRING TO UPPER DIVISION PROGRAMS AT 4-YEAR INSTITUTIONS. STUDENTS WHO WISH TO TAKE AN EMPHASIS IN SCIENCE TAKE COURSES IN MATHEMATICS, BIOLOGY, CHEMISTRY, AND PHYSICS. STUDENTS ARE REQUIRED TO TAKE 30 CREDITS IN THE BIBLE. THIS INCLUDES HISTORY AND LITERATURE OF THE BIBLE, AS WELL AS DOCTRINE.

--- DEGREES OFFERED: AN ASSOCIATE IN ARTS AND BIBLE DEGREE IS OFFERED.

- - - - - 84016 COLLEGE OF SAINT BENEDICT

--- OBJECTIVES OF THE PROGRAM: THE 'INDIVIDUALIZED MAJOR' PROGRAM IS AVAILABLE FOR STUDENTS WHO HAVE IDENTIFIED GOALS THAT CANNOT BE SATISFIED THROUGH A TRADITIONAL DEPARTMENTAL MAJOR. THE 'LIBERAL STUDIES' PROGRAM ALLOWS STUDENTS TO DESIGN A PROGRAM THAT WILL RESULT IN A BROAD AND COMPREHENSIVE LIBERAL EDUCATION WITHOUT A SPECIFIED AREA OF CONCENTRATION. STUDENTS INTERESTED IN 'SOCIAL SCIENCE' MAY EARN A MAJOR IN THAT BROAD AREA. THE 'HUMANITIES' MAJOR WILL ALLOW A BROAD BASED AREA WITHIN A SINGLE DEPARTMENT. AREAS INCLUDE MEDIEVAL STUDIES, CLASSICAL CIVILIZATION, CHRISTIAN HUMANISM AND MODERN EUROPEAN STUDIES. THE 'MEDIEVAL STUDIES' MAJOR IS DESIGNED FOR STUDENTS WHO HAVE AN INTEREST IN THE MIDDLE AGES. CAREER EXPLORATION IS A REQUIRED PART OF THE HUMANITIES MAJOR.

--- DEGREES OFFERED: A BACHELOR OF ARTS DEGREE IS OFFERED. THE LIBERAL STUDIES PROGRAM ALSO OFFERS AN ASSOCIATE OF ARTS DEGREE.

- - - - - 84021 SAINT PAUL BIBLE COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'ASSOCIATE OF ARTS' PROGRAM PROVIDES STUDENTS WITH A GENERAL EDUCATION. IT SERVES AS A FOUNDATION FOR MOST 4 YEAR COLLEGE MAJORS. ALL STUDENTS IN THIS PROGRAM COMPLETE COURSE WORK IN BIBLICAL AND THEOLOGICAL STUDIES, HUMANITIES, AND THE NATURAL AND SOCIAL SCIENCES. STUDENTS WITH SPECIAL INTEREST IN THE SOCIAL SCIENCES, NATURAL SCIENCES OR HUMANITIES MAY CHOOSE THEIR ELECTIVE COURSES IN THOSE AREAS.

--- DEGREES OFFERED: AN ASSOCIATE OF ARTS DEGREE IS OFFERED.

448 LIBERAL STUDIES TRANSFER PROGRAMS:

- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE

- - - - - 27147 VERMILION COMMUNITY COLLEGE

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

521 GENERAL PHYSICAL SCIENCE

The study of physical science (also known as general science or natural science) is intended to provide greater diversity than is ordinarily possible with a major in a single science. Some schools allow it to include study in two different disciplines. For example, a student may elect physics or chemistry as a primary field of study, and then take chemistry, physics, physical geology, or historical geology as a secondary field. Some students use this major for pre-professional preparation in the environmental or health sciences. Others prepare to teach physical science by taking the required education courses. Physical science degrees at the bachelor's, master's, and doctoral levels are found at most four year colleges and universities. Most community colleges offer the first two years of undergraduate courses which transfer to four year institutions.

---PROGRAM ADMISSION: Preparation for a science major should include four years of mathematics, laboratory sciences, communications, and English composition. A foreign language may be helpful. Transfer students may need college algebra, trigonometry, and laboratory sciences.

---TYPICAL COURSE WORK: Instruction includes lectures, outside scientific and technical reading, lab work, and research writing. Courses may include:

Mathematics	Chemistry
Biology	Geology
Physics	Astronomy
Earth Sciences	Atmospheric Science

See school catalogs for more complete descriptions of course work.

---GRADUATION REQUIREMENTS: Requirements vary. See college catalogs for detailed information.

---RELATED PROGRAMS: PROG 531 Life Sciences, 236 Secondary Education, 522 Astronomy, 529 Physics, 524 Chemistry, 526 Geology, 528 Oceanography, 448 Liberal Studies.

---DIRECTLY RELATED OCCUPATIONS: DESC 2621 Physical Scientists.

ASSOCIATED OCCUPATIONS: DESC 2612 Geologists, 2618 Chemists, 2619 Oceanographers, 8112 Physicians, 8454 University & College Teachers, 8453 Elementary School Teachers, 8457 Secondary School Teachers, 2674 Environmental Health Specialists, 2626 Limnologists.

CIPS: 40.01

SCHOOLS:

- - - - - 27145 'WILLMAR COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: STUDENTS WHO PREFER THE 'SCIENCES' MAY CHOOSE THEIR COURSES ACCORDINGLY IN AN AREA OF INTEREST.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: THE 'EARTH SCIENCE' PROGRAM WHICH IS

OFFERED THROUGH THE COLLEGE OF EDUCATION PREPARES STUDENTS TO TEACH EARTH SCIENCES IN JUNIOR AND SENIOR HIGH SCHOOLS. STUDENTS MAY ENTER THIS PROGRAM IN THEIR THIRD YEAR OF COLLEGE. ALL STUDENTS COMPLETE BASIC SCIENCE COURSES IN BIOLOGY, CHEMISTRY, AND PHYSICS. THEY ALSO STUDY GEOLOGY, OCEANOGRAPHY OR LIMNOLOGY, ASTRONOMY, SOIL SCIENCE, AND METEOROLOGY. THEY MUST ALSO TAKE THE REQUIRED TEACHING COURSES AND COMPLETE A STUDENT TEACHING EXPERIENCE. SEVERAL TYPES OF GENERAL SCIENCE PROGRAMS ARE AVAILABLE. THE COLLEGE OF BIOLOGICAL SCIENCES ADMITS A SELECT NUMBER OF STUDENTS TO ITS 'INDIVIDUALLY DESIGNED' PROGRAMS. THESE STUDENTS MAY CHOOSE COURSES TO CREATE A PROGRAM WHICH MEETS THEIR OWN SCIENCE INTERESTS. CONTINUING EDUCATION AND EXTENSION OFFERS A 'MATHEMATICS AND SCIENCE' PROGRAM. STUDENTS IN THIS PROGRAM TAKE 45 CREDITS IN MATH AND SCIENCE. THOSE WHO WANT TO TEACH SCIENCE IN GRADES 5-9 MAY ENTER THE 'BROAD AREA SCIENCE' PROGRAM IN THE COLLEGE OF EDUCATION IN THEIR THIRD YEAR OF COLLEGE. OTHER PROGRAMS ARE OFFERED WHICH ARE NOT SPECIFICALLY DESIGNED AS SCIENCE PROGRAMS, BUT WHICH GIVE STUDENTS THE CHANCE TO DESIGN A PROGRAM WHICH MEETS THEIR OWN NEEDS. THESE ARE GENERAL COLLEGE'S 'APPLIED STUDIES' AND 'GENERAL STUDIES' PROGRAMS (WHICH ARE ALSO AVAILABLE THROUGH EXTENSION), THE COLLEGE OF ARTS 'INDIVIDUALLY DESIGNED INTERDEPARTMENTAL' PROGRAM (WHICH IS ALSO OFFERED THROUGH EXTENSION) AND THE UNIVERSITY COLLEGE'S 'INTERCOLLEGE' AND 'UNIVERSITY WITHOUT WALLS' PROGRAMS.

--- DEGREES OFFERED: GRADUATES OF THE EARTH SCIENCE PROGRAM RECEIVE THE BACHELOR OF SCIENCE DEGREE AND ARE RECOMMENDED FOR TEACHING LICENSURE. THEY MAY THEN PURSUE A MASTER OF EDUCATION DEGREE. THE COLLEGE OF BIOLOGICAL SCIENCE AND THE COLLEGE OF EDUCATION AWARD THE BACHELOR OF SCIENCE DEGREE. EXTENSION'S MATH AND SCIENCE PROGRAMS LEAD TO A CERTIFICATE. APPLIED STUDIES LEAD TO THE BACHELOR OF APPLIED STUDIES AND GENERAL STUDIES LEAD TO THE BACHELOR OF GENERAL STUDIES. THE INDIVIDUALLY DESIGNED LIBERAL ARTS PROGRAM LEADS TO THE BACHELOR OF ARTS DEGREE. THE TWO UNIVERSITY COLLEGE PROGRAMS MAY LEAD TO EITHER THE B.S. OR B.A., DEPENDING ON PROGRAM DESIGN.

533 SCIENCE TECHNOLOGIES

Programs in science technologies are designed to prepare people to support and assist scientists and engineers. Programs stress specialized, practical knowledge related to the mechanical, mathematical, scientific, or technical aspects of various sciences. People working in biological technologies would do such things as work in a laboratory preparing or processing specimens for biological science research or operational procedures. Other technologists might assist biologists in the field, collecting or identifying samples of organisms. People working in nuclear technologies might assist nuclear scientists in handling nuclear materials, or in radiation detection and decontamination. People, working in physical science technologies, might assist scientists in areas such as chemistry, geology, metallurgy, and meteorology.

Some community colleges offer a variety of two year associate degree programs designed to prepare students to work in individual science technology fields.

---PROGRAM ADMISSION: Requirements vary. See college catalogs.

---TYPICAL COURSE WORK: Course work varies according to specialty being studied. Programs require that students take background courses such as English and health, plus classes that train them in the instruments and procedures of the particular field they are studying. In addition, most programs include mathematics classes at the algebra level or above. Instruction is by lecture and a great deal of appropriate laboratory and field work.

---GRADUATION REQUIREMENTS: Requirements vary. See college catalogs for more information.

---RELATED PROGRAMS: PROG 122 Marine Technology, 253 Engineering Technologies, 291 Drafting, 383 Medical Laboratory Technologies, 385 Radiologic Technology, 387 Other Health Technologies, 528 Oceanography, 524 Chemistry, 531 Life Sciences.

---DIRECTLY RELATED OCCUPATIONS: DESC 2672 Quality Control Inspectors, 8192 Radiologic Technologists, 2361 Civil Engineering Technicians, 2674 Environmental Health Specialists.

ASSOCIATED OCCUPATIONS: DESC 2627 Agronomists, 2618 Chemists, 2625 Limnologists, 2621 Physical Scientists.

CIPS: 41.

SCHOOLS:

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

---OBJECTIVES OF THE PROGRAM: THE 'FLUID POWER TECHNICIAN' PROGRAM PREPARES INDIVIDUALS TO SET UP AND PERFORM COMPLEX FLUID POWER TESTS AND TO ASSEMBLE, SERVICE, MAINTAIN, REPAIR, AND DESIGN FLUID POWER EQUIPMENT AND/OR COMPONENTS. INSTRUCTION INCLUDES READING AND ANALYZING BLUEPRINTS, SCHEMATICS, DIAGRAMS AND DRAWINGS TO DETERMINE FABRICATION AND ASSEMBLY SPECIFICATIONS; FABRICATING PRECISION PARTS IN MACHINE SHOPS AND USING MEASURING INSTRUMENTS; CHECKING FOR PRECISE ATTAINMENT OF PART SPECIFICATIONS; ASSEMBLING FLUID POWER UNITS USING HAND TOOLS; SETTING UP

AND ADJUSTING TEST EQUIPMENT ACCORDING TO SPECIFIED PROCEDURES; TESTING FLUID POWER EQUIPMENT AND ANALYZING AND INTERPRETING TEST DATA AND INFORMATION TO COMPARE WITH TEST GOALS; MAKING CHANGES IN TESTS TO IMPROVE QUALITY, QUANTITY AND TESTING OPERATION EFFICIENCY; AND DESIGNING AND/OR RECOMMENDING DESIGN CHANGES OF FLUID POWER UNITS USING KNOWLEDGE OF THE PRINCIPLES, THEORIES AND PRACTICES OF HYDRAULIC, PNEUMATIC, ELECTRICAL AND ELECTRONIC POWER CONTROL SYSTEMS.

--- DEGREES OFFERED: A DIPLOMA IN FLUID POWER TECHNOLOGY IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 19 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$200 FOR BOOKS, \$6 FOR SAFETY GLASSES AND \$500 FOR TOOLS.

- - - - - 25013 GRANITE FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'FLUID POWER TECHNICIAN' PROGRAM PREPARES INDIVIDUALS TO SET UP AND PERFORM COMPLEX FLUID POWER TESTS AND TO ASSEMBLE, SERVICE, MAINTAIN, REPAIR, AND DESIGN FLUID POWER EQUIPMENT AND/OR COMPONENTS. INSTRUCTION INCLUDES READING AND ANALYZING BLUEPRINTS, SCHEMATICS, DIAGRAMS AND DRAWINGS TO DETERMINE FABRICATION AND ASSEMBLY SPECIFICATIONS; FABRICATING PRECISION PARTS IN MACHINE SHOPS AND USING MEASURING INSTRUMENTS; CHECKING FOR PRECISE ATTAINMENT OF PART SPECIFICATIONS; ASSEMBLING FLUID POWER UNITS USING HAND TOOLS; SETTING UP AND ADJUSTING TEST EQUIPMENT ACCORDING TO SPECIFIED PROCEDURES; TESTING FLUID POWER EQUIPMENT AND ANALYZING AND INTERPRETING TEST DATA AND INFORMATION TO COMPARE WITH TEST GOALS; MAKING CHANGES IN TESTS TO IMPROVE QUALITY, QUANTITY AND TESTING OPERATION EFFICIENCY; AND DESIGNING AND/OR RECOMMENDING DESIGN CHANGES OF FLUID POWER UNITS USING KNOWLEDGE OF THE PRINCIPLES, THEORIES AND PRACTICES OF HYDRAULIC, PNEUMATIC, ELECTRICAL AND ELECTRONIC POWER CONTROL SYSTEMS.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ENVIRONMENTAL TECHNICAL OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO DETECT, MEASURE, AND CONTROL AIR POLLUTION. INSTRUCTION INCLUDES THE CHEMISTRY OF COMBUSTION, FROM WHICH THE MAJORITY OF POLLUTING ELEMENTS IN THE AIR ARE DERIVED; THE MAJOR SOURCES OF AIR POLLUTION, SUCH AS INTERNAL COMBUSTION ENGINES, POWER PLANTS, AND INDUSTRIAL OR HOME USE OF FUELS; METHODS OF SAMPLING SMOKESTACKS; DETECTION AND SOURCE IDENTIFICATION AND ANALYSIS OF AIR POLLUTANTS, BOTH GASEOUS AND PARTICULATE; AND THE CONSTRUCTION, USE, AND CALIBRATION OF AUTOMATIC SAMPLES, RECORDERS, AND OTHER ANALYTICAL DEVICES.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 19 MONTHS LONG.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CHEMICAL LABORATORY TECHNICIAN OCCUPATIONS' PROGRAM PROVIDES INDIVIDUALS WITH A SOLID FOUNDATION IN THE BASIC PRINCIPLES OF THE SCIENCES WITH HEAVY CONCENTRATION IN THE SCIENCE OF CHEMISTRY. THE INSTRUCTION INCLUDES ANALYTICAL PROCEDURES REQUIRED TO CONTROL CHEMICAL PROCESSES AS WELL AS PROCEDURES USED TO ACQUIRE DATA FOR RESEARCH AND DEVELOPMENT. IT PREPARES INDIVIDUALS TO SUPPORT CHEMISTS AND CHEMICAL ENGINEERS IN THE CHEMICAL MANUFACTURING FIELD. THIS MAY INCLUDE CHEMICAL ENGINEERING FUNCTIONS SUCH AS MATERIAL HANDLING, CRUSHING, GRINDING, SIZING, EXTRACTING, DISTILLATING, EVAPORATING, DRYING, ABSORBING AND HEAT TRANSFERRING. IT ALSO MAY INCLUDE ASSISTING PROFESSIONALS IN DESIGN, INSTALLATION AND OPERATION OF PILOT PLANT OPERATIONS FOR CHEMICAL MANUFACTURING PROCESSES.

--- LENGTH OF PROGRAM: THIS IS A NINE MONTH PROGRAM.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'WATER AND WASTE TREATMENT TECHNICIAN OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO PROCESS, PURIFY, STORE, CONTROL POLLUTION, DISTRIBUTE, AND DISPOSE OF WASTEWATER. INSTRUCTION INCLUDES THE DESIGN, CONSTRUCTION, OPERATION, AND MAINTENANCE OF EQUIPMENT FOR WATER OR WASTEWATER COLLECTION, PROCESSING, POLLUTION CONTROL, AND DISTRIBUTION; OPERATION OF MACHINES, DEVICES, AND CONTROL SYSTEMS WHICH USE SOPHISTICATED MODERN INSTRUMENTATION; TESTING OF SAMPLES OF MATERIALS AT VARIOUS STAGES IN THE PROCESS DESIGN; HYDRAULICS; LIQUID COLLECTION; LIQUID PROCESSING EQUIPMENT; PUMPING AND CONVEYING; SAMPLING AND TESTING, BOTH CHEMICALLY AND BIOLOGICALLY; PROCESSES OF PURIFICATION, DIGESTION, BIOLOGICAL DETERIORATION, AND DISINTERGRATION OF WASTEWATER PRODUCTS; PLANT LAYOUT, OPERATION, AND SAFETY; AND THE REGULATIONS AND STANDARDS CONTROLLING WATER OF WASTE-WATER PURIFICATION. THE INSTRUCTION ALSO INCLUDES MICROBIOLOGY AND CHEMISTRY TO ENABLE STUDENTS TO FUNCTION IN AN ANALYTICAL LABORATORY SETTING, WHICH OPERATES AS A QUALITY CONTROL CENTER FOR SUBJECT AREAS. STUDENTS MAY ALSO FUNCTION IN PLANT OPERATION IN THIS AREA.

--- LENGTH OF PROGRAM: THIS IS AN ELEVEN MONTH PROGRAM.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

---OBJECTIVES OF THE PROGRAM: THE 'ENVIRONMENTAL TECHNICAL OCCUPATIONS' PROGRAM PREPARES INDIVIDUALS TO DETECT, MEASURE, AND CONTROL AIR POLLUTION. INSTRUCTION INCLUDES THE CHEMISTRY OF COMBUSTION FROM WHICH THE MAJORITY OF POLLUTING ELEMENTS IN THE AIR ARE DERIVED; THE MAJOR SOURCES OF AIR POLLUTION, SUCH AS INTERNAL COMBUSTION ENGINES, POWER PLANTS, AND INDUSTRIAL OR HOME USE OF FUELS; METHODS OF SAMPLING SMOKESTACKS; DETECTION AND SOURCE IDENTIFICATION AND ANALYSIS OF AIR POLLUTANTS, BOTH GASEOUS AND PARTICULATE; AND THE CONSTRUCTION, USE AND CALIBRATION OF AUTOMATIC SAMPLES, RECORDERS, AND OTHER ANALYTICAL DEVICES.

THE 'POWDERED METALLURGY' PROGRAM PREPARES INDIVIDUALS TO SUPPORT PROFESSIONAL PERSONNEL IN THE PRODUCTION OF, QUALITY CONTROL OF, AND RESEARCH ON METALS. INSTRUCTION INCLUDES CONDUCTING TESTS ON THE PROPERTIES OF METALS; DESIGNING AND DEVELOPING PILOT AND PRODUCTION PLANTS; DEVELOPING, OPERATING, AND ALTERING TEST PROCEDURES, PROCESSES, AND EQUIPMENT; AND THE ANALYSIS OF DATA AND PREPARATION OF REPORTS.

THE 'FLUID POWER TECHNICIAN' PROGRAM PREPARES INDIVIDUALS TO SET UP AND PERFORM COMPLEX FLUID POWER TESTS AND TO ASSEMBLE, SERVICE, MAINTAIN, REPAIR, AND DESIGN FLUID POWER EQUIPMENT AND/OR COMPONENTS. INSTRUCTION INCLUDES READING AND ANALYZING BLUEPRINTS, SCHEMATICS, DIAGRAMS AND DRAWINGS TO DETERMINE FABRICATION AND ASSEMBLY SPECIFICATIONS; FABRICATING PRECISION PARTS IN MACHINE SHOPS AND USING MEASURING INSTRUMENTS; CHECKING FOR PRECISE ATTAINMENT OF PART SPECIFICATIONS; ASSEMBLING FLUID POWER UNITS USING HAND TOOLS; SETTING UP AND ADJUSTING TEST EQUIPMENT ACCORDING TO SPECIFIED PROCEDURES; TESTING FLUID POWER EQUIPMENT AND ANALYZING AND INTERPRETING TEST DATA AND INFORMATION TO COMPARE WITH TEST GOALS; MAKING CHANGES IN TESTS TO IMPROVE QUALITY, QUANTITY AND TESTING OPERATION EFFICIENCY; AND DESIGNING AND/OR RECOMMENDING DESIGN CHANGES OF FLUID POWER UNITS USING KNOWLEDGE OF THE PRINCIPLES, THEORIES AND PRACTICES OF HYDRAULIC, PNEUMATIC, ELECTRICAL AND ELECTRONIC POWER CONTROL SYSTEMS.

--- LENGTH OF PROGRAM: THE ENVIRONMENTAL TECHNOLOGY PROGRAM IS 10 TO 18 MONTHS LONG. THE POWDERED METALLURGY PROGRAM IS FOUR TO 22 MONTHS LONG. THE FLUID POWER PROGRAM IS 12 TO 22 MONTHS LONG.

- - - - - 26071 MANKATO STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'WATER QUALITY/POLLUTION CONTROL' PROGRAM IS A 96 CREDIT PROGRAM HOUSED IN THE CHEMISTRY DEPARTMENT.

--- DEGREES OFFERED: AN ASSOCIATE OF SCIENCE DEGREE IS OFFERED.

- - - - - 26072 MOORHEAD STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'INDUSTRIAL TECHNOLOGY' PROGRAM IS A 89 CREDIT MAJOR WHICH PREPARES STUDENTS TO ASSUME ONE OF MANY POSITIONS: AS AN ADMINISTRATIVE/DESIGN INDUSTRIAL OR SYSTEMS ENGINEER, OR IN ANY OTHER ENGINEERING-RELATED MANAGEMENT JOB OF BUSINESS AND INDUSTRY. AN ASSOCIATE IN SCIENCE IN TECHNICAL AID PROGRAM IS ALSO AVAILABLE.

--- DEGREES OFFERED: ASSOCIATE OF SCIENCE AND A BACHELOR OF SCIENCE DEGREES ARE OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAM IS 1-4 YEARS LONG.

Programs in recreation are designed to prepare people for leadership and administrative positions in a variety of recreational settings. Graduates work in city recreation and park departments, community service agencies, hospitals and health facilities, private industry, correctional institutions, resorts and recreation clubs, the armed services, and in federal and state parks and forests. Many four year colleges and universities offer bachelor's degree programs in recreation; some also offer graduate degree programs. Some community colleges offer two year programs which may be transferred to a four year college or university.

---PROGRAM ADMISSION: A high school diploma or its equivalent is normally required for admission to undergraduate programs. A bachelor's degree is usually required for admission to graduate programs.

---TYPICAL COURSE WORK: Programs in recreation usually require that students complete general background courses in physical science, social science, physical education, health, and arts and letters. Some require natural resource and forestry courses. In addition students are required to take recreation courses, such as the following:

Recreation Activity Leadership	Camp Counseling
Leisure for Special Groups	Camp Administration
Principles of Outdoor Leadership	Community Youth Services
Outdoor Recreation Planning	Outdoor Recreation Management

---GRADUATION REQUIREMENTS: Requirements vary. See college catalogs for more information.

---THINGS TO KNOW: Many four year programs in recreation include extensive internship possibilities or requirements. Some schools use the title 'Leisure Studies' for programs in this field.

---RELATED PROGRAMS: PROG 236 Secondary Education, 234 Elementary Education, 367 Rehabilitation Services (for recreation therapy).

---DIRECTLY RELATED OCCUPATIONS: DESC 8177 Physical Therapists, 8486 Recreation Leaders, 8443 Recreation therapist.

ASSOCIATED OCCUPATIONS: DESC 4123 Park Rangers, 4124 Foresters.

CIPS: 31.
12.02 (except 12.0202)
12.99

SCHOOLS:

- - - - - 81004 UNIVERSITY OF MINNESOTA - CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'NATURAL RESOURCES TECHNOLOGY' MAJOR OFFERS AN OPTION IN 'PARK AND RECREATIONAL AREA MANAGEMENT'. THIS PROGRAM TRAINS STUDENTS FOR PARAPROFESSIONAL POSITIONS IN THE PARK AND RECREATION FIELDS. COURSES INCLUDE SCIENCES, MATH, ECOLOGY, RECREATION TECHNIQUES, AND PARK PLANNING AND MANAGEMENT AS WELL AS A 6 CREDIT INTERNSHIP.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE WITH A MAJOR IN NATURAL RESOURCES TECHNOLOGY (PARK AND RECREATIONAL AREA MANAGEMENT OPTION) IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 81005 UNIVERSITY OF MINNESOTA-WASECA TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE HOME AND FAMILY SERVICES DIVISION OFFERS MAJORS IN 'CHILD CARE SERVICES', 'FAMILY MERCHANDISING', 'RURAL HOME SERVICES' WITH AN OPTION IN 'SERVICES TO THE RURAL ELDERLY', AND 'RURAL YOUTH AND RECREATION'. THESE PROGRAMS ARE DESIGNED TO TRAIN AIDES AND TECHNICIANS WHO PROVIDE SERVICES FOR RURAL FAMILIES. STUDENTS TAKE AGRICULTURE AND RELATED EDUCATION COURSES AS WELL AS A PREOCCUPATIONAL PREPARATION UNIT AND COURSES IN THEIR MAJOR. NOTE: NOT NOW ACCEPTING STUDENTS IN RURAL YOUTH AND RECREATION MAJOR.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A TWO YEAR PROGRAM.

565 SOCIAL SERVICE

Programs in social service are designed to prepare people to aid others in solving personal and social problems. Graduates work in a variety of settings and institutions, including state and local social service agencies, child welfare agencies, group homes, crisis intervention centers, centers for the elderly, and medical and mental health centers. Some community colleges offer associate degree programs which prepares people to assist professional social workers and social service specialists. In addition, most community colleges offer the first two years of bachelor's degree requirements which may be transferred to a four year program in social work or human services. Master's of Social Work programs, usually two years beyond the bachelor's degree, provide the specialized study and extensive supervised field experience generally required for supervisory, administrative, or research work. At the present time, there are more than twenty states with requirements for either licensing or registration (for details, see PREP 8417).

---PROGRAM ADMISSION: Many graduate programs in social work require letters of reference, a personal statement regarding interests and career objectives, and/or an interview.

---TYPICAL COURSE WORK: Instruction consists of lectures, reading, discussion, papers, and field experience. Bachelor's and master's degree programs usually have heavy sociology and psychology emphases, with some instruction in research design and principles. Coursework varies, but usually include:

Social Work Processes	Community Organization
Human Services Administration	Family Welfare
Social Work Practicum	Counseling
Supervision in Social Work	Social Policy Planning

---GRADUATION REQUIREMENTS: Most graduate programs require candidates for the Master's of Social Work to successfully complete a final examination project or a thesis.

---THINGS TO KNOW: In some graduate social work programs, students who have completed an accredited undergraduate major in social work are eligible for a reduction of credit requirements. Part-time programs in social service are available.

---RELATED PROGRAMS: PROG 562 Public Administration, 567 Criminal Justice, 238 Counseling, 564 Recreation, 162 Health Care Administration, 391 Home Economics. In addition, many schools offer social service specialty options in sociology and psychology degree programs (for details, see 587 Sociology or 541 Psychology).

---DIRECTLY RELATED OCCUPATIONS: DESC 8417 Social Workers.

ASSOCIATED OCCUPATIONS: DESC 8414 Counselors, 8418 Psychologists, 8421 Probation Officers, 8486 Recreation Leaders.

---REFERENCES:

Academy of Certified Social Workers
National Association of Social Workers
7981 Eastern Avenue
Silver Spring, Maryland 20910

CIPS: 44.02
44.07
44.99

SCHOOLS:

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HUMAN SERVICES, GENERAL' PROGRAM PREPARES INDIVIDUALS TO ASSIST NURSING AND MENTAL HEALTH PERSONNEL IN THE CARE AND TREATMENT OF THE MENTALLY ILL, AGED, DRUG ADDICTED, AND PHYSICALLY HANDICAPPED. INSTRUCTION INCLUDES NEW PATTERNS OF LIVING AND ADMINISTERING PRESCRIBED MEDICATION.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 WEEKS LONG.

- - - - - 25012 FARIBAULT AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HUMAN SERVICES, MENTAL HEALTH' PROGRAM PREPARES INDIVIDUALS TO PERFORM ROUTINE TASKS RELATED TO MENTAL HEALTH. INSTRUCTION INCLUDES THE CARE, TREATMENT, AND REHABILITATIVE ACTIVITIES FOR THE AGED, MENTALLY ILL, OR MENTALLY HANDICAPPED, AS SUPERVISED BY A PHYSICIAN IN A HOSPITAL OR MENTAL HEALTH CLINIC.

--- LENGTH OF PROGRAM: THIS PROGRAM IS THREE MONTHS LONG.

- - - - - 25015 HUTCHINSON AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'EDUCATION AIDS' PROGRAM PREPARES INDIVIDUALS TO ASSIST TEACHERS IN CONDUCTING AND CARRYING OUT THE OBJECTIVES OF AN EDUCATIONAL OR CARE PROGRAM WITHIN THE CONTEXT OF A SCHOOL OR A PARTICULAR SETTING, INCLUDING HOSPITALS AND HEALTH CARE FACILITIES. AN INSTRUCTIONAL PROGRAM AND PLANNING FOR PHYSICAL AND SOCIAL DEVELOPMENT, EDUCATIONAL AND SOCIAL ACTIVITIES; UNDERSTANDING THE HEALTH AND SAFETY OF THE INDIVIDUAL INVOLVED IN THE PROGRAM; AND ADMINISTRATIVE AND MANAGERIAL ACTI-VITIES ARE INCLUDED IN THE INSTRUCTION.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 26-40 WEEKS LONG.

- - - - - 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HUMAN SERVICES, GENERAL' PROGRAM PREPARES INDIVIDUALS TO ASSIST NURSING AND MENTAL HEALTH PERSONNEL IN THE CARE AND TREATMENT OF THE MENTALLY ILL, AGED, DRUG ADDICTED, AND PHYSICALLY HANDICAPPED. INSTRUCTION INCLUDES NEW PATTERNS OF LIVING AND ADMINISTERING PRESCRIBED MEDICATION.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 84 WEEKS LONG.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HUMAN SERVICES, GENERAL' PROGRAM PREPARES INDIVIDUALS TO ASSIST NURSING AND MENTAL HEALTH PERSONNEL IN THE CARE AND TREATMENT OF THE MENTALLY ILL, AGED, DRUG ADDICTED, AND PHYSICALLY HANDICAPPED. INSTRUCTION INCLUDES NEW PATTERNS OF LIVING AND ADMINISTERING PRESCRIBED MEDICATION.

--- LENGTH OF PROGRAM: THIS PROGRAM IS TEN MONTHS LONG.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'HUMAN SERVICES, GENERAL' PROGRAM PREPARES INDIVIDUALS TO ASSIST NURSING AND MENTAL HEALTH PERSONNEL IN THE CARE AND TREATMENT OF THE MENTALLY ILL, AGED, DRUG ADDICTED, AND PHYSICALLY HANDICAPPED. INSTRUCTION INCLUDES NEW PATTERNS OF LIVING AND ADMINISTERING PRESCRIBED MEDICATION.

--- LENGTH OF PROGRAM: THIS PROGRAM IS NINE MONTHS LONG.

- - - - - 27139 AUSTIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'CLINICAL CHILD CARE' PROGRAM TRAINS STUDENTS TO WORK WITH YOUTH IN RESIDENTIAL TREATMENT CENTERS AND GROUP HOMES. THE PROGRAM HELPS STUDENTS LEARN SKILLS IN AREAS SUCH AS LISTENING AND UNDERSTANDING ALL KINDS OF COMMUNICATION, USING GROUP DYNAMICS, USING RECREATION, AND PROBLEM SOLVING. THE PROGRAM COMBINES CLASSROOM STUDY AND PRACTICAL EXPERIENCE.

--- DEGREES OFFERED: GRADUATES RECEIVE THE ASSOCIATE OF SCIENCE OR ASSOCIATE OF APPLIED SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THE PROGRAM IS TWO YEARS LONG.

- - - - - 27145 WILLMAR COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THIS PROGRAM HAS TWO TRACKS: 'HUMAN SERVICE' AND 'CHEMICAL DEPENDENCY COUNSELING'. THE 'HUMAN SERVICE TECHNICIAN' PROGRAM TRAINS STUDENTS TO ASSIST PROFESSIONAL PERSONNEL IN HUMAN SERVICE AREAS. THE PROGRAM MAY BE DESIGNED FOR STUDENTS WHO WISH TO TRANSFER TO A BACHELOR'S DEGREE. THE WORK AREAS MAY BE RECEPTION, GROUP CARE, CASE WORK, RECREATION, THERAPY, REHABILITATION, SPECIAL EDUCATION COUNSELING (ADJUSTMENT AND VOCATIONAL), FAMILY COUNSELING, AND OTHER ASPECTS AS DELEGATED BY THE PROFESSIONAL PERSON. THE 'CHEMICAL DEPENDENCY' TRACK IS DESIGNED TO TRAIN INDIVIDUALS WHO WISH TO WORK WITH THE CHEMICALLY DEPENDENT IN A COUNSELING ROLE.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: BOTH PROGRAMS ARE TWO YEARS LONG.

- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: A 'HUMAN SERVICES' PROGRAM IS OFFERED. STUDENTS IN THIS PROGRAM ACQUIRE AN UNDERSTANDING OF THE PRINCIPLES, CONCEPTS, SKILLS, METHODS AND TECHNIQUES OF HUMAN SERVICES NECESSARY FOR ENTRY LEVEL EMPLOYMENT IN GROUP HOMES, SOCIAL WELFARE AGENCIES, HOSPITALS, NURSING HOMES, HALF-WAY HOUSES AND OTHER PUBLIC SERVICE RELATED BUSINESSES OR INDUSTRIES. THE THRUST OF THIS PROGRAM WOULD BE GENERAL IN NATURE, WITH MOST IF NOT ALL COURSES READILY TRANSFERABLE TOWARD A BACCALAUREATE DEGREE.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 92 CREDIT HOURS (2 YEARS) LONG.

- - - - - 27150 MESABI COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'HUMAN SERVICE' PROGRAM PREPARES STUDENTS TO WORK AS SOCIAL REHABILITATION SERVICE TECHNICIANS IN THE STATE CIVIL SERVICE OR IN COMPARABLE POSITIONS WITH OTHER GOVERNMENT AGENCIES. STUDENTS STUDY GENERAL LIBERAL EDUCATION SUBJECTS AS WELL AS PROGRAM RELATED COURSES LIKE DRUG USE AND ABUSE, SOCIOLOGY AND SOCIAL PROBLEMS, MARRIAGE AND FAMILY, INTERVIEWING TECHNIQUES, PSYCHOLOGY, GROUP DYNAMICS, AND HUMAN RELATIONS. NEW COURSES IN GERIATRIC SOCIAL WORK HAVE BEEN ADDED TO THE PROGRAM. SECOND YEAR STUDENTS ARE REQUIRED TO PARTICIPATE IN A SUPERVISED INTERNSHIP EXPERIENCE.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IN HUMAN SERVICE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'HUMAN SERVICES' PROGRAM PROVIDES BOTH

GENERAL AND SPECIALIZED TRAINING TO PEOPLE INTERESTED IN WORKING IN THE HUMAN SERVICES. IT MAY BE USEFUL EITHER TO PEOPLE WHO DESIRE ENTRY LEVEL TRAINING OR IN-SERVICE TRAINING. PEOPLE IN THIS PROGRAM COMPLETE A CORE OF INTRODUCTORY COURSES IN BROAD-BASED HELPING SKILLS, SUCH AS COMMUNITY RESOURCES, INDIVIDUAL INTERVIEWING SKILLS, GROUP SKILLS, CASE MANAGEMENT AND PROGRAM PLANNING. THEY MAY ALSO TAKE HUMAN SERVICE ELECTIVES THAT FOCUS ON SPECIAL POPULATIONS, SUCH AS YOUTH, ELDERLY AND DISABLED PEOPLE, TO BETTER UNDERSTAND THESE POPULATIONS.

--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE DEGREE IS OFFERED IN BOTH PROGRAMS.

--- LENGTH OF PROGRAM: BOTH PROGRAMS ARE TWO YEAR PROGRAMS.

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'RECREATIONAL LEADERSHIP' PROGRAM TRAINS STUDENTS FOR EMPLOYMENT AS RECREATIONAL LEADERS IN HOSPITALS, NURSING HOMES, MUNICIPAL PARK AND RECREATION DEPARTMENTS, CAMPS, AND STATE AND LOCAL GOVERNMENT AGENCIES. STUDENTS STUDY THE TECHNIQUES AND ART OF RECREATION LEADERSHIP AND COMPLETE AN INTERNSHIP.

--- DEGREES OFFERED: GRADUATES EARN AN ASSOCIATE IN APPLIED SCIENCE DEGREE.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'HUMAN SERVICES' PROGRAM PREPARES STUDENTS FOR SEMIPROFESSIONAL POSITIONS IN THE HELPING PROFESSIONS. STUDENTS COMPLETE COURSES IN SOCIAL WELFARE, INTERVIEWING, COUNSELING, COMMUNITY RELATIONS, AND AN INTERNSHIP AS WELL AS GENERAL EDUCATION COURSES IN THE BEHAVIORAL AND SOCIAL SCIENCES, ENGLISH, HUMANITIES, MATH/SCIENCE, AND PHYSICAL EDUCATION AND PUBLIC HEALTH.

--- DEGREES OFFERED: AN ASSOCIATE IN ARTS DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'HUMAN SERVICES WORKER' PROGRAM PROVIDES STUDENTS WITH THE TRAINING NECESSARY TO BECOME A HUMAN SERVICES GENERALIST. STUDENTS WILL GAIN AN EXPERIENTIAL BACKGROUND IN ONE OR MORE AREAS OF HUMAN SERVICE. THEY WILL EXAMINE THEIR OWN ATTITUDES AND FEELINGS IN RELATION TO WORKING WITH PEOPLE AND WILL PARTICIPATE IN GROUP LEARNING EXPERIENCES AND FIELD EXPERIENCES IN ADDITION TO COMPLETING REQUIRED COURSES. SPECIALIZATION OPTIONS ARE AVAILABLE IN CHILD DEVELOPMENT AND IN THERAPEUTIC RECREATION. COMPLETION OF THE TOTAL HUMAN SERVICES WORKER PROGRAM WITH A CONCENTRATION IN THERAPEUTIC RECREATION WILL QUALIFY A STUDENT FOR CERTIFICATION BY THE NATIONAL COUNCIL FOR THERAPEUTIC RECREATION CERTIFICATION.

--- DEGREES OFFERED: GRADUATES EARN AN ASSOCIATE DEGREE.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: SEVERAL TYPES OF SOCIAL SERVICE PROGRAMS ARE OFFERED. THE SCHOOL OF SOCIAL WORK IN THE COLLEGE OF HOME ECONOMICS OFFERS A SOCIAL SERVICES COLLATERAL (OR SUPPORTING FIELD) THAT MAY BE COMBINED WITH A VARIETY OF UNDERGRADUATE MAJORS. THE 'HUMAN RELATIONSHIPS' PROGRAM IN THE COLLEGE OF HOME ECONOMICS FEATURES AN AREA OF EMPHASIS IN YOUTH STUDIES, SOCIAL SERVICES OR FAMILY RELATIONSHIPS. GENERAL COLLEGE OFFERS A

'HUMAN SERVICES GENERALIST' PROGRAM WHICH IS ALSO AVAILABLE THROUGH EXTENSION. THIS PROGRAM FOCUSES ON SOCIAL PROBLEMS AND ISSUES THROUGH CLASS WORK AND ON-THE-JOB TRAINING. THE SCHOOL OF PUBLIC HEALTH OFFERS A DEGREE PROGRAM FOR CHEMICAL DEPENDENCY PROFESSIONALS JOINTLY WITH THE UNIVERSITY WITHOUT WALLS. PUBLIC HEALTH ALSO OFFERS A CHEMICAL DEPENDENCY COUNSELING PROGRAM THROUGH EXTENSION. CONTINUING EDUCATION AND EXTENSION ALSO OFFERS PROGRAMS CALLED 'FOSTER CARE EDUCATION', 'TRAINING PROGRAM FOR MENTAL HEALTH WORKERS', AND 'AGING STUDIES'. THE FIRST IS DESIGNED MOSTLY FOR FOSTER PARENTS AND SOCIAL WORKERS. THE SECOND IS BASICALLY AN IN-SERVICE PROGRAM FOR PEOPLE WHO ARE WORKING IN THE MENTAL HEALTH FIELD. THE THIRD PROVIDES TRAINING FOR PEOPLE WHO WANT TO WORK WITH OLDER PEOPLE. THE 'AGING STUDIES' PROGRAM INCLUDES BASIC GERONTOLOGY COURSES AS WELL AS AN INTERNSHIP. IT PREPARES GRADUATES FOR WORK IN HOSPITALS, NURSING HOMES, COMMUNITY CENTERS, MULTISERVICE AGENCIES, AND HOME CARE PROGRAMS. THE PROGRAM IS OFFERED IN GENERAL COLLEGE. THE 'HUMAN SERVICES GENERALIST' CERTIFICATE IS OFFERED JOINTLY BY THE DEPARTMENT OF PSYCHIATRY AND GENERAL COLLEGE. IT IS DESIGNED TO PREPARE PEOPLE FOR JOBS AS COUNSELORS, COMMUNITY ORGANIZERS, BEHAVIOR ANALYSTS, INFORMATION AND REFERRAL COORDINATORS, AND TEACHERS OF THE RETARDED.

--- DEGREES OFFERED: THE BACHELOR OF SCIENCE DEGREE IS OFFERED IN THE COLLEGE OF HOME ECONOMICS. THE MASTER OF SOCIAL WORK, AND DOCTOR OF PHILOSOPHY DEGREES ARE OFFERED IN SOCIAL WORK. A CERTIFICATE AND THE ASSOCIATE IN ARTS DEGREE ARE OFFERED IN THE HUMAN SERVICES GENERALIST PROGRAM. THE DEGREE PROGRAM FOR CHEMICAL DEPENDENCY PROFESSIONALS LEADS TO A B.S., WHILE THE COUNSELING PROGRAM LEADS TO A CERTIFICATE. FOSTER CARE EDUCATION, AGING STUDIES, AND THE MENTAL HEALTH WORKER PROGRAM LEAD TO CERTIFICATES.

- - - - - 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE HOSPITALITY AND HOME ECONOMICS DIVISION OFFERS A 'SERVICES FOR AGING' OPTION. THIS PROGRAM PROVIDES STUDENTS WITH THE PRINCIPLES AND TECHNIQUES ESSENTIAL TO DEVELOPING SKILLS AND COMPETENCE IN PROVIDING SERVICES TO THE ELDERLY. THE TRAINING PREPARES STUDENTS TO PLAN SOCIAL ACTIVITIES, ORGANIZE HOBBY INTERESTS, AND PROVIDE LEADERSHIP AS A PARAPROFESSIONAL.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 81005 UNIVERSITY OF MINNESOTA-WASECA TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'RURAL HOME SERVICES' MAJOR PROVIDES AN OPTION OF EMPHASIS ON 'SERVICES TO THE RURAL ELDERLY,' 'RURAL YOUTH AND RECREATION' MAJORS AND 'CHILD CARE SERVICES.' THIS PROGRAM IS DESIGNED TO PREPARE STUDENTS FOR WORK IN THE FAMILY SERVICES FIELDS. STUDENTS TAKE AGRICULTURE AND RELATED EDUCATION COURSES AS WELL AS COURSES IN THEIR MAJOR AREA. NOTE: NOT NOW ACCEPTING STUDENTS IN RURAL YOUTH AND RECREATION MAJOR.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 83001 BETHANY LUTHERAN JUNIOR COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'HUMAN SERVICES CURRICULUM' PREPARES STUDENTS FOR PARA-PROFESSIONAL JOBS IN COMMUNITY SERVICE. THESE MIGHT BE IN SUCH AREAS AS CHILD CARE, FAMILY SERVICE, OR GERIATRICS. STUDENTS COMPLETE COURSE WORK IN THE AREAS OF RELIGION, ENGLISH, HEALTH, BIOLOGY, SOCIOLOGY, EDUCATION, PSYCHOLOGY, HOME ECONOMICS, ART, MUSIC, PHYSICS, AND PHYSICAL EDUCATION.

--- DEGREES OFFERED: GRADUATES RECEIVE THE ASSOCIATE IN ARTS DEGREE OR THE JUNIOR COLLEGE DIPLOMA.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 83003 GOLDEN VALLEY LUTHERAN COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'INSTITUTIONAL WORK' PROGRAM TRAINS PEOPLE FOR WORK IN INSTITUTIONS WHICH SERVE THE AGED, THE MENTALLY RETARDED, THE PHYSICALLY HANDICAPPED, AND THE EMOTIONALLY DISTURBED. THE PROGRAM COMBINES LIBERAL ARTS, BIBLICAL STUDIES, AND SOCIAL SERVICE. THE SOCIAL SERVICE COURSES ARE DESIGNED TO INTRODUCE STUDENTS TO THE PROBLEMS AND NEEDS OF INSTITUTIONALIZED PEOPLE AND TO HELP STUDENTS DEVELOP THE SKILLS TO MEET THOSE NEEDS.

--- DEGREES OFFERED: COMPLETION OF THIS PROGRAM LEADS TO THE ASSOCIATE IN ARTS DEGREE.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 83004 SAINT MARY'S JUNIOR COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'HEALTH AND WELLNESS' PROGRAM IS DESIGNED FOR PRACTITIONERS IN ALLIED HEALTH, NURSING, MEDICINE, COUNSELING, SOCIAL WORK AND RELATED FIELDS WHO WISH TO INCORPORATE HEALTH AND WELLNESS PRINCIPLES INTO THEIR EXISTING MODE OF PRACTICE. THE PROGRAM IS BASED ON THREE PRIMARY AREAS: HEALTH-LIFESTYLE ASSESSMENT AND PROGRAM DESIGN, HEALTH COUNSELING, AND COMMUNITY RESOURCE NETWORKING. COURSES INCLUDE NUTRITION, ALTERNATIVE THERAPIES, APPLICATIONS FOR CHRONIC ILLNESS AND DISABILITY, AND PHYSICAL FITNESS.

--- DEGREES OFFERED: GRADUATES OF THIS PROGRAM RECEIVE A CERTIFICATE

--- LENGTH OF PROGRAM: THIS PROGRAM IS FOUR QUARTERS.

565 SOCIAL SERVICES TRANSFER PROGRAMS:

- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27144 ITASCA COMMUNITY COLLEGE
- - - - - 27147 VERMILION COMMUNITY COLLEGE
- - - - - 27148 ROCHESTER COMMUNITY COLLEGE
- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE
- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE
- - - - - 27156 NORMANDALE COMMUNITY COLLEGE
- - - - - 27157 INVER HILLS COMMUNITY COLLEGE
- - - - - 83002 CROSIER SEMINARY JUNIOR COLLEGE
- - - - - 84005 CONCORDIA COLLEGE (ST. PAUL)
- - - - - 84013 NORTH CENTRAL BIBLE COLLEGE
- - - - - 84014 NORTHWESTERN COLLEGE
- - - - - 84015 PILLSBURY COLLEGE

Programs in criminal justice are designed to prepare students for careers in federal, state, and local law enforcement agencies, in correctional agencies and institutions, and in private security agencies. Criminal justice programs also provide additional training for persons already involved in law enforcement administration, correctional administration, forensic science, law enforcement science, and security management. Students study the roles and activities of people with regard to maintaining law and order, providing services, protecting life and property, and conducting administration, planning, and research. Programs include six month to one year programs at proprietary schools, two year programs at community colleges, and bachelor's and master's programs at four year colleges. The master's degree programs intend to prepare people to work as administrators of criminal justice agencies.

---PROGRAM ADMISSION: For some programs, students must not have any felony convictions.

---TYPICAL COURSE WORK: Instruction consists of lectures, written assignments, seminars, workshops, internships, and independent research and study. Courses vary but usually include the following:

Criminology	Penology
Juvenile Delinquency	Correctional Counseling
Probation and Parole	Criminal Law
Criminal Investigation	Police/Community Relations

Additional course work may be in human relations, political science, history, and in the natural and physical sciences. Some programs concentrate on the study of psychology and sociology.

---GRADUATION REQUIREMENTS: Requirements vary, depending on the length of the program. See college catalogs for more information.

---THINGS TO KNOW: Some schools offer both day and evening classes, allowing students to complete degrees by attending part-time.

---RELATED PROGRAMS: PROG 421 Law, 565 Social Service, 587 Sociology, 238 Counseling.

---DIRECTLY RELATED OCCUPATIONS: DESC 8421 Probation Officers, 9414 Police Officers, 1138 Public Administrators, 9476 Security Guards.

ASSOCIATED OCCUPATIONS: DESC 8414 School Counselors, 8417 Social Workers, 8418 Psychologists.

---REFERENCES:

Minnesota Board of Peace Officer Standards and Training
500 Metro Square Building
St. Paul, Minnesota 55101

CIPS: 43.01
43.99

SCHOOLS:

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'LAW ENFORCEMENT' PROGRAM PREPARES

INDIVIDUALS TO WORK IN A LAW ENFORCEMENT AGENCY. INSTRUCTION INCLUDES PATROL AND INVESTIGATIVE ACTIVITIES; TRAFFIC CONTROL; PROCEDURES FOR INITIAL CONTACT WITH THE PUBLIC IN SUCH MATTERS AS OBTAINING INFORMATION, PREPARING REPORTS, AND TESTIFYING IN COURT; TECHNIQUES FOR COLLECTION, PREPARATION AND TRANSPORTATION OF PHYSICAL EVIDENCE; METHODS OF CRIME PREVENTION; AND METHODS FOR INVESTIGATION AND REFERRAL OF ADULT AND YOUTHFUL OFFENDERS.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IN LAW ENFORCEMENT IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 18 MONTHS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$200 PER YEAR FOR BOOKS AND UNIFORMS.

- - - - - 25014 HIBBING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'LAW ENFORCEMENT' PROGRAM PREPARES INDIVIDUALS TO WORK IN A LAW ENFORCEMENT AGENCY. INSTRUCTION INCLUDES PATROL AND INVESTIGATIVE ACTIVITIES; TRAFFIC CONTROL; PROCEDURES FOR INITIAL CONTACT WITH THE PUBLIC IN SUCH MATTERS AS OBTAINING INFORMATION, PREPARING REPORTS, AND TESTIFYING IN COURT; TECHNIQUES FOR COLLECTION, PREPARATION AND TRANSPORTATION OF PHYSICAL EVIDENCE; METHODS OF CRIME PREVENTION; AND METHODS FOR INVESTIGATION AND REFERRAL OF ADULT AND YOUTHFUL OFFENDERS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED FROM HIBBING AVTI AND AN ASSOCIATE DEGREE FROM HIBBING COMMUNITY COLLEGE.

--- LENGTH OF PROGRAM: THE PROGRAM IS 18 MONTHS LONG, WITH A SUMMER INTERNSHIP PROVIDED FOR THOSE STUDENTS WHO MAY BENEFIT BY THIS ADDITIONAL EXPERIENCE AND CAN MEET WORK STUDY ELIGIBILITY.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$130 FOR BOOKS, SUPPLIES, EQUIPMENT.

- - - - - 26070 BEMIDJI STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE BACHELOR OF SCIENCE IN 'CRIMINAL JUSTICE' IS DESIGNED TO PREPARE STUDENTS FOR CAREERS AT THE FEDERAL, STATE AND LOCAL LEVELS OF GOVERNMENT IN THE CRIMINAL JUSTICE/CORRECTIONS AREA. COMMON COURSES INCLUDE: PENOLOGY, JUVENILE DELINQUENCY, CRIMINOLOGY, CORRECTIONAL SYSTEMS, AND COUNSELING INTERVIEW.

--- DEGREES OFFERED: AN ASSOCIATE OF SCIENCE DEGREE AND A BACHELOR OF SCIENCE DEGREE ARE OFFERED.

--- LENGTH OF PROGRAM: THE ASSOCIATE OF SCIENCE PROGRAM IS TWO YEARS LONG.

- - - - - 26071 MANKATO STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'LAW ENFORCEMENT' PROGRAM IS DESIGNED TO ENCOURAGE BOTH PRE-SERVICE AND IN-SERVICE STUDENTS TO SEEK OR PROMOTE A CAREER IN CRIMINAL JUSTICE. THE MAJOR CONSISTS OF REQUIRED COURSES IN LAW ENFORCEMENT, CRIMINAL LAW, LAW ENFORCEMENT ADMINISTRATION/PLANNING, CRIMINAL INVESTIGATION, CRIMINOLOGY AND PENOLOGY. AN ASSOCIATE PROGRAM IN LAW ENFORCEMENT IS ALSO OFFERED.

THE BACHELOR OF SCIENCE MAJOR IN 'CORRECTIONS' IS DESIGNED TO PROVIDE ACADEMIC TRAINING AND FIELD EXPERIENCE FOR STUDENTS WHO WISH TO WORK IN THE CORRECTIONAL FIELD UPON GRADUATION. EMPLOYMENT MAY BE FOUND IN A VARIETY OF SETTINGS INCLUDING PROBATION AND PAROLE, HALFWAY HOUSES, YOUTH AGENCIES, CORRECTIONAL INSTITUTIONS, AND OTHER TYPES OF CUSTODIAL AND TREATMENT CENTERS. THE GRADUATE PROGRAM IN 'CORRECTIONS' IS DESIGNED TO MEET NEEDS FOR TEACHING, RESEARCH AND LEADERSHIP IN THE ADMINISTRATION OF JUSTICE AND THE TREATMENT OF CRIMINAL OFFENDERS. THIS PROGRAM PROVIDES GRADUATE LEVEL EDUCATION FOR RESEARCH PERSONNEL, PROFESSIONAL POLICY MAKERS AND ADMINISTRATORS, AND THOSE WORKING IN A TREATMENT CENTER.

--- DEGREES OFFERED: AN ASSOCIATE OF SCIENCE, A BACHELOR OF ARTS, A

BACHELOR OF SCIENCE AND A MASTER OF SCIENCE DEGREES ARE OFFERED.

- - - - - 27140 BRAINERD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'CRIMINAL JUSTICE' PROGRAM, WHICH IS OFFERED COOPERATIVELY BY BRAINERD COMMUNITY COLLEGE AND BEMIDJI STATE UNIVERSITY IS DESIGNED FOR STUDENTS WHO WISH TO WORK IN CRIMINAL JUSTICE AGENCIES. THESE MAY INCLUDE PATROL, MUNICIPAL AND COUNTY POLICE, BORDER PATROL, SECURITY, AND GOVERNMENTAL JUSTICE AGENCIES. STUDENTS TAKE 5 QUARTERS OF GENERAL EDUCATION AT BRAINERD AND AT THE SAME TIME TAKE SPECIAL COURSES FROM BEMIDJI AT BCC. THESE INCLUDE LAW ENFORCEMENT, CRIMINAL JUSTICE, DEVIANT BEHAVIOR, CORRECTIONS, AND CRIME PREVENTION.

--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE DEGREE IS OFFERED BY BEMIDJI STATE UNIVERSITY.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$300 FOR BOOKS AND SUPPLIES.

- - - - - 27145 WILLMAR COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'LAW ENFORCEMENT' PROGRAM TRAINS STUDENTS FOR ENTRY EMPLOYMENT WITH LOCAL, STATE, AND FEDERAL AGENCIES. THE PROGRAM MAY BE DESIGNED FOR STUDENTS WHO DESIRE TO TRANSFER AND PURSUE A BACHELOR'S DEGREE. ACADEMIC COURSES INCLUDE MATH, ENGLISH, LAB SCIENCE, SOCIOLOGY, PSYCHOLOGY, SPEECH, PHYSICAL EDUCATION, AND HEALTH.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE LAW ENFORCEMENT PROGRAM IS 2 YEARS LONG.

- - - - - 27148 ROCHESTER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'LAW ENFORCEMENT' PROGRAM IS DESIGNED FOR THOSE STUDENTS ENTERING THE PROGRAM WITHOUT PRIOR EXPERIENCE AS WELL AS THOSE STUDENTS WITH A BACKGROUND IN LAW ENFORCEMENT WHO MAY AVAIL THEMSELVES OF AN IN-SERVICE PROGRAM. STUDENTS ARE PREPARED TO WRITE THE POST BOARD EXAM TO BECOME LICENSED LAW ENFORCEMENT OFFICERS.

--- DEGREES OFFERED: AN ASSOCIATE IN SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THE LAW ENFORCEMENT PROGRAM IS 2 YEARS LONG.

- - - - - 27149 NORTHLAND COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'LAW ENFORCEMENT PROGRAM' IS CERTIFIED BY THE MINNESOTA BOARD OF PEACE OFFICE STANDARDS AND TRAINING (M.P.O.S.T.) FOR THE ACADEMIC PORTION OF THE BASIC REQUIRED PROGRAM. GRADUATES OF NORTHLAND'S TWO-YEAR PROGRAM ARE ELIGIBLE TO TAKE BOTH THE SKILLS AND ACADEMIC M.P.O.S.T. LICENSING EXAMINATIONS. STUDENTS COMPLETE WORK IN PSYCHOLOGY, SOCIOLOGY, POLITICAL SCIENCE, AND HEALTH AS WELL AS SPECIALIZED LAW ENFORCEMENT COURSES.

--- DEGREES OFFERED: AN ASSOCIATE IN ARTS DEGREE WITH AN OCCUPATIONAL ENDORSEMENT IS OFFERED.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 27150 MESABI COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'LAW ENFORCEMENT' PROGRAM PREPARES STUDENTS TO ENTER A VARIETY OF CAREERS IN THE CRIMINAL JUSTICE FIELD. THE CURRICULUM IMPROVES SKILLS AND UNDERSTANDING IN PROBLEM SOLVING, HUMAN RELATIONS, AND PUBLIC SERVICE. STUDENTS COMPLETE COURSES IN CRIMINAL JUSTICE, GOVERNMENT, SOCIOLOGY, CRIME AND DELINQUENCY, CRIMINAL INVESTIGATION, CRIMINAL EVIDENCE AND PROCEDURE, CONSTITUTIONAL LAW, AND

CRIMINAL LAW AS WELL AS LIBERAL EDUCATION. THIS PROGRAM IS CERTIFIED BY THE MINNESOTA BOARD OF PEACE OFFICE STANDARDS AND TRAINING. GRADUATES ARE ELIGIBLE TO WRITE THE ACADEMIC LICENSING EXAMINATION.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: LAW ENFORCEMENT IS A 2 YEAR PROGRAM.

- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'LAW ENFORCEMENT' PROGRAM PROVIDES PRE-EMPLOYMENT TRAINING FOR STUDENTS WHO DESIRE TO ENTER THE LAW ENFORCEMENT FIELD. IT ALSO PROVIDES IN-SERVICE TRAINING FOR THE EMPLOYED OFFICER. STUDENTS COMPLETE LAW ENFORCEMENT COURSES AS WELL AS GENERAL EDUCATION COURSES. THE 'LAW ENFORCEMENT SKILLS TRAINING' PROGRAM HELPS GRADUATES OF APPROVED 2 YEAR LAW ENFORCEMENT PROGRAMS MEET THE SKILLS REQUIREMENTS OF THE PEACE OFFICER STANDARDS AND TRAINING BOARD LICENSE EXAM. STUDENTS DEVELOP SKILLS IN INVESTIGATIONS, PATROL, FIREARMS, DRIVING, DEFENSIVE TACTICS, TRAFFIC LAWS, AND PHYSICAL CONDITIONING.

--- DEGREES OFFERED: GRADUATES RECEIVE AN ASSOCIATE OF ARTS DEGREE. STUDENTS WHO COMPLETE SKILLS PROGRAM MAY TAKE THE P.O.S.T. LICENSE EXAM.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM. THE SKILLS PROGRAM IS 6 WEEKS LONG, ABOUT 8 TO 14 HOURS PER DAY. THIS INCLUDES NIGHT FIELD WORK.

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'LAW ENFORCEMENT' PROGRAM PROVIDES PRE-EMPLOYMENT TRAINING FOR THOSE WHO WISH TO ENTER THE LAW ENFORCEMENT FIELD AND IN-SERVICE EDUCATION FOR THE EMPLOYED OFFICER. STUDENTS COMPLETE GENERAL EDUCATION COURSES AS WELL AS COURSES IN DRUGS AND HEALTH, CRIMINAL LAW, CRIMINAL BEHAVIOR, EVIDENCE AND PROCEDURES, CRIMINAL INVESTIGATION, AND POLICE ADMINISTRATION AND OPERATIONS. A POLICE FIELD EXPERIENCE IS OPTIONAL. AFTER SUCCESSFULLY COMPLETING THIS PROGRAM A STUDENT IS ELIGIBLE TO TAKE THE ACADEMIC PORTION OF THE LICENSING EXAMINATION.

--- DEGREES OFFERED: AN ASSOCIATE IN APPLIED SCIENCE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: LAW ENFORCEMENT IS A 2 YEAR PROGRAM.

- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: MINNESOTA LAW NOW MAKES IT POSSIBLE FOR A STUDENT TO BECOME LICENSED AS A PEACE OFFICER THROUGH A CURRICULUM OF EDUCATION AND TRAINING OFFERED PRIOR TO HIRING BY A POLICE AGENCY. THE LAW ENFORCEMENT PROGRAM AT LAKEWOOD IS MINNESOTA BOARD OF PEACE OFFICE STANDARDS AND TRAINING (POST) APPROVED AND OFFERS AN EDUCATIONAL PROGRAM WHICH PREPARES STUDENTS FOR ENTRY INTO A SKILLS COURSE. UPON COMPLETION OF THE LAKEWOOD PROGRAM, STUDENTS ARE ELIGIBLE TO TAKE THE FIRST PORTION OF A LICENSING EXAMINATION AND APPLY FOR ENTRY INTO A SKILLS COURSE. UPON COMPLETION OF THE SKILLS COURSE AND THE REMAINING PORTION OF THE POST LICENSING EXAMINATION, GRADUATES ARE ELIGIBLE FOR EMPLOYMENT AND LICENSURE. THE 'CORRECTIONS' PROGRAM PROVIDES THEORETICAL AND PRACTICAL INSTRUCTION FOR PERSONS INTERESTED IN CORRECTIONS AS A CAREER OR AN AVOCATION OR AS CONCERNED CITIZENS. STUDENTS COMPLETE COURSES IN CORRECTIONAL TECHNIQUES AND ORGANIZATION AND A PRACTICUM AND INTERNSHIP AS WELL AS GENERAL EDUCATION COURSES IN ENGLISH, HUMANITIES, BEHAVIORAL/SOCIAL SCIENCE, MATH, SCIENCE, AND PHYSICAL EDUCATION AND PUBLIC HEALTH.

--- DEGREES OFFERED: AN ASSOCIATE OF ARTS DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THESE ARE 2 YEAR PROGRAMS.

- - - - - 27156 NORMANDALE COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'LAW ENFORCEMENT' PROGRAM PROVIDES TRAINING FOR PERSONS INTERESTED IN ENTERING THE LAW ENFORCEMENT FIELD AND

PROVIDES ADDITIONAL TRAINING FOR IN-SERVICE POLICE OFFICERS. STUDENTS COMPLETE COURSES IN CRIMINAL LAW, JUSTICE, POLICE OPERATIONS, SOCIOLOGY, PSYCHOLOGY, AND REPORT WRITING.

--- DEGREES OFFERED: GRADUATES OF THIS PROGRAM RECEIVE AN ASSOCIATE IN APPLIED SCIENCE DEGREE AND ARE ELIGIBLE FOR THE LAW ENFORCEMENT SKILLS COURSE AND MAY THEN TAKE THE STATE LICENSING EXAM.

--- LENGTH OF PROGRAM: THE PROGRAM IS 2 YEARS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE ABOUT \$650 FOR THE SKILLS COURSE.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THIS PROGRAM PREPARES INDIVIDUALS FOR ENTRANCE INTO A CAREER IN LAW ENFORCEMENT, AND FOR IN-SERVICE PEOPLE AN OPPORTUNITY TO UPGRADE SKILLS. GRADUATION FROM THE PROGRAM QUALIFIES ONE TO TAKE THE MINNESOTA PEACE OFFICERS STANDARDS AND TRAINING BOARD (P.O.S.T.) ACADEMIC LICENSING EXAMINATION. STUDENTS TAKE GENERAL EDUCATION AND LAW ENFORCEMENT CLASSES AS WELL AS ELECTIVES IN THE SOCIAL SCIENCES AND COMMUNICATIONS.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: LAW ENFORCEMENT IS A 2 YEAR PROGRAM.

- - - - - 81001 UNIVERSITY OF MINNESOTA (DULUTH)

--- OBJECTIVES OF THE PROGRAM: THE 'CRIMINOLOGY' PROGRAM ALLOWS THE STUDENT TO OBTAIN A CONCENTRATION IN EITHER CORRECTIONS OR LAW ENFORCEMENT. THE PROGRAM PROVIDES PREPARATION FOR ADVANCED STUDY, FOR JOB ENTRY, AND FOR THE MINNESOTA PEACE OFFICERS STANDARDS AND TRAINING (P.O.S.T.) BOARD ACADEMIC EXAMINATION. REQUIRED COURSES INCLUDE: INTRODUCTION TO CRIMINAL JUSTICE, SOCIAL RESEARCH METHODS AND SOCIOLOGICAL THEORIES OF DEVIANCE.

--- DEGREES OFFERED: A BACHELOR OF ARTS DEGREE IN CRIMINOLOGY OR AN ASSOCIATE OF ARTS IN LAW ENFORCEMENT IS OFFERED.

- - - - - 81002 UNIVERSITY OF MINNEOSTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: THE 'LAW ENFORCEMENT/CORRECTIONS' PROGRAM IS OFFERED BY GENERAL COLLEGE AND IS AUGMENTED BY ADVANCED COURSES FROM THE DEPARTMENT OF SOCIOLOGY. THIS COURSEWORK PREPARES STUDENTS TO MEET THE MINNESOTA PEACE OFFICERS STANDARD AND TRAINING BOARD REQUIREMENTS OR TO WORK IN THE FIELD OF CORRECTIONS.

--- DEGREES OFFERED: ASSOCIATE OF ARTS OR BACCALAUREATE DEGREES ARE OFFERED.

567 CRIMINAL JUSTICE TRANSFER PROGRAMS:

- - - - - 27139 AUSTIN COMMUNITY COLLEGE
- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27144 ITASCA COMMUNITY COLLEGE
- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE
- - - - - 27147 VERMILION COMMUNITY COLLEGE
- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE
- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE
- - - - - 83002 CROSIER SEMINARY JUNIOR COLLEGE
- - - - - 84013 NORTH CENTRAL BIBLE COLLEGE
- - - - - 84014 NORTHWESTERN COLLEGE
- - - - - 84015 PILLSBURY COLLEGE

Programs in fire control intend to prepare students to work as fire fighters, as administrators of fire departments, and as designers of fire prevention systems. Program graduates usually seek employment with fire departments or insurance companies, or in industrial fire safety occupations. These programs also provide additional training for employed fire fighters who are interested in improving their skills. Programs in fire control cover the essentials of fire chemistry, dynamics, statics, and the way in which materials behave under various conditions of stress, including heat, process, and transportation. The design of industrial structures and conveyances for the maximum protection of the worker and the general public are other areas of study. Many community colleges offer two year programs in fire control. Some four year colleges offer a bachelor's degree with a specialty in fire protection administration and technology.

---PROGRAM ADMISSION: A background in science and math is helpful.

---TYPICAL COURSE WORK: Instruction consists of lectures, technical reading, independent research and study, and lab work. Most programs include courses in:

Fire Fighting Tactics	Building Construction
Fire Hydraulics	for Fire Prevention
Fire Company Organization	Fire Protection Tactics
Hazardous Materials	and Systems

Other courses may include physical and social sciences and mathematics.

---GRADUATION REQUIREMENTS: Requirements vary depending on the length of the program. See college catalogs for more information.

---THINGS TO KNOW: Both full-time and part-time programs are available.

---RELATED PROGRAMS: PROG 567 Criminal Justice, 118 Forestry and Natural Resources.

---DIRECTLY RELATED OCCUPATIONS: DESC 9426 Fire Fighters.

ASSOCIATED OCCUPATIONS: DESC 1614 Claims Adjusters, 2674 Environmental Health Specialists.

CIPS: 43.02

SCHOOLS:

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: THE 'FIRE PROTECTION CERTIFICATE' PROGRAM IS OFFERED THROUGH CONTINUING EDUCATION AND EXTENSION. IT IS DESIGNED FOR PEOPLE WHO ARE INTERESTED IN FIRE PROTECTION, INSURANCE INSPECTION, OR THE MANUFACTURE OF FIRE CONTROL EQUIPMENT. FIRE CONTROL COURSES ARE ONLY OFFERED THROUGH THE DEPARTMENT OF EXTENSION INDEPENDENT STUDY. OTHER REQUIRED COURSES IN AREAS SUCH AS ENGLISH, PSYCHOLOGY, SOCIOLOGY, AND POLITICAL SCIENCE ARE OFFERED IN DAY SCHOOL AND EXTENSION. THE 'FIRE SERVICE' PROGRAM OFFERED IN GENERAL COLLEGE, IN COOPERATION WITH INDEPENDENT STUDY, SERVES AS THE REPRESENTATIVE FOR THE OPEN LEARNING FOR FIRE SERVICE PROGRAM (OLFSP) IN THE UPPER MIDWEST. ADVANCED COURSES IN FIRE SCIENCE ARE OFFERED THROUGH INDEPENDENT STUDY.

--- DEGREES OFFERED: A FIRE PROTECTION CERTIFICATE IS OFFERED.

569 FIRE CONTROL TRANSFER PROGRAMS:

- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE

Religion is the study of faiths and practices that usually focus on eternal truths or beings. There are a number of ways to study religion. One approach is to focus on the history, worship, and traditions of one religion. Another is to compare religions through persons, rituals, or thoughts. Students may look at value systems, world views, religion's historical and cultural roles, major religious movements, or the meaning of life as methods of examining religion. These programs intend to develop critical and meditative thinking habits. Some courses help students in their own religious search and self-understanding. These programs may provide students with a background for the ministry or teaching professions, a liberal arts education, or personal growth. Bachelor degree programs in religion are found at most universities. Some schools also offer master's and doctoral degrees.

---PROGRAM ADMISSION: A strong general background in social science and literature is helpful.

---TYPICAL COURSE WORK: Religion programs usually include lectures, discussions, and a large amount of reading. Courses may include:

Introduction to World Religions	Mysticism
Introduction to Major Religious Texts	Psychology of Religion
Introduction to Major Religious Leaders	Philosophy of Religion
Comparative Religion	Symbolism and Myths
Religion and Culture	Old Testament
Religion and Science	New Testament
Values and Ethics	Eastern Christianity
Buddhism	Ancient Church History
Islam	(1st Century to Renaissance)
Judaism	Modern Church History
Hinduism	(Reformation to Present)
	New Testament Greek

---GRADUATION REQUIREMENTS: Some schools highly recommend that religion majors take at least three semesters of a language other than their own. French, German, Greek, or Hebrew is preferable, depending on the focus of their studies.

---RELATED PROGRAMS: PROG 595 Theology, 591 Philosophy.

ASSOCIATED OCCUPATIONS: DESC 8435 Clergy, 8412 Counselors, 8453 Elementary School Teachers, 8457 Secondary School Teachers, 8454 University and College Teachers.

CIPS: 38.02

SCHOOLS:

- - - - - 83001 BETHANY LUTHERAN JUNIOR COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE COLLEGE OFFERS A 'CHURCH SERVICE CURRICULUM' WHICH PREPARES STUDENTS FOR PARISH WORK, CHRISTIAN EDUCATION, AND YOUTH WORK. STUDENTS COMPLETE COURSES IN RELIGION, ENGLISH, PHYSICS, BIOLOGY, TYPING, ART, PSYCHOLOGY, SOCIOLOGY, EDUCATION, AND MUSIC. THEY MAY ALSO TAKE PART IN PRACTICAL WORK EXPERIENCES AT THE COLLEGE AND WITH MANKATO CONGREGATIONS.

--- DEGREES OFFERED: GRADUATES RECEIVE THE ASSOCIATE IN ARTS DEGREE OR THE JUNIOR COLLEGE DIPLOMA.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 83003 GOLDEN VALLEY LUTHERAN COLLEGE

--- OBJECTIVES OF THE PROGRAM: FOUR RELIGIOUS STUDIES PROGRAMS ARE OFFERED. THEY INCLUDE THE 'LIBERAL ARTS CURRICULUM WITH A CONCENTRATION IN BIBLICAL AND THEOLOGICAL STUDIES', WHICH COMBINES GENERAL STUDIES WITH A BACKGROUND IN THE BIBLE AND THEOLOGY; AND THE 'CHURCH STAFF WORK CURRICULUM', WHICH COMBINES LIBERAL ARTS WITH TRAINING AS A CHURCH STAFF WORKER, INCLUDING VISITATION, YOUTH WORK, EDUCATION, AND SECRETARIAL DUTIES. TWO 'WORLD MISSION' CURRICULA ARE ALSO OFFERED. BOTH ALLOW STUDENTS TO GAIN A BACKGROUND IN CHRISTIAN SERVICE AND MISSION WORK, BUT THE LONGER ONE ALSO PROVIDES A LIBERAL ARTS BACKGROUND. THESE TWO PROGRAMS PREPARE STUDENTS FOR FURTHER TRAINING IN MISSION VOCATIONS.

--- DEGREES OFFERED: ASSOCIATE IN ARTS DEGREES ARE OFFERED IN LIBERAL ARTS, CHURCH STAFF WORK, AND WORLD MISSION. THE SHORTER WORLD MISSION PROGRAM LEADS TO A ONE YEAR VOCATIONAL CERTIFICATE.

--- LENGTH OF PROGRAM: THE ASSOCIATE DEGREE PROGRAMS ARE TWO YEARS LONG, WHILE THE WORLD MISSION CERTIFICATE PROGRAM IS ONE YEAR LONG.

- - - - - 84014 NORTHWESTERN COLLEGE

--- OBJECTIVES OF THE PROGRAM: A ONE YEAR 'BIBLICAL ARTS' PROGRAM IS DESIGNED FOR STUDENTS WHO WISH CONCENTRATED TRAINING IN THE WORD OF GOD. ALL STUDENTS WHO ARE ENROLLED IN ANOTHER MAJOR PROGRAM MUST ALSO COMPLETE THIS BIBLE PROGRAM. THE 4 YEAR 'MINISTRIES' PROGRAM AND THE 4 YEAR 'CHRISTIAN EDUCATION' PROGRAM PREPARE THE STUDENT FOR CAREERS IN THE CHURCH MINISTRY OR ON THE MISSION FIELD. THEY ALSO PROVIDE PREPARATION FOR SEMINARY OR GRADUATE STUDY. COURSES INCLUDE BIBLE HISTORY AND LITERATURE AS WELL AS DOCTRINE AND THE REQUIRED ELECTIVES.

--- DEGREES OFFERED: THE 1 YEAR PROGRAM OFFERS A CERTIFICATE IN BIBLICAL ARTS WHILE THE 4 YEAR PROGRAM OFFERS A BACHELOR OF ARTS DEGREE.

592 RELIGION TRANSFER PROGRAMS:

- - - - - 26071 MANKATO STATE UNIVERSITY
- - - - - 27139 AUSTIN COMMUNITY COLLEGE
- - - - - 27140 BRAINERD COMMUNITY COLLEGE
- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE
- - - - - 27143 HIBBING COMMUNITY COLLEGE
- - - - - 27144 ITASCA COMMUNITY COLLEGE
- - - - - 27145 WILLMAR COMMUNITY COLLEGE
- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE
- - - - - 27147 VERMILION COMMUNITY COLLEGE
- - - - - 27148 ROCHESTER COMMUNITY COLLEGE
- - - - - 27149 NORTHLAND COMMUNITY COLLEGE
- - - - - 27150 MESABI COMMUNITY COLLEGE
- - - - - 27151 MINNEAPOLIS COMMUNITY COLLEGE

- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE
- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE
- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE
- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE
- - - - - 27156 NORMANDALE COMMUNITY COLLEGE
- - - - - 27157 INVER HILLS COMMUNITY COLLEGE
- - - - - 83002 CROSIER SEMINARY JUNIOR COLLEGE
- - - - - 83003 GOLDEN VALLEY LUTHERAN COLLEGE
- - - - - 83021 ST. PAUL BIBLE COLLEGE

Theology programs intend to prepare people to become religious leaders, such as ministers, priests, rabbis, missionaries, administrators, or religious education directors. Specialty areas include Bible/theology, religious education, ministry, mission work, music, communications, pastoral counseling, and church administration. Programs are available at private colleges, institutes, seminaries, and liberal arts colleges. One to two year certificate and diploma programs are designed to prepare people to become lay workers. Two year associate degree programs intend to prepare students as pastors or lay workers, or to transfer to a four year college program. Four year undergraduate programs may prepare students as pastors, religious educators, missionaries, or for graduate study in these fields.

Each religious organization sets its own licensing and ordination policies. Most require candidates to have a bachelor's degree and at least three years of graduate theology studies in order to be ordained. (See PREP 8435.)

---PROGRAM ADMISSION: Graduate theology programs usually require a bachelor's degree. Undergraduate programs usually require a high school diploma or its equivalent. Volunteer work in a church or synagogue shows interest and ability for these programs. Prospective theological students are advised to talk to local religious leaders of their faith about schools and programs, and about their personal ability to enter and complete a program. To enter undergraduate programs, a student should have taken high school college prep classes with a focus on language skills and social sciences. It is helpful to have studied or acquired skills in:

English	Music
Speech	History
Psychology	Social Science
Writing	Foreign, Modern, or Latin Languages
Mathematics	Literature

To enter graduate programs, it is helpful to have studied the above in more depth, plus philosophy, religion, fine arts, and the natural and behavioral sciences.

---TYPICAL COURSE WORK: All theology programs have in common the study of God and specific religious writings, leaders, and faiths. Most programs are taught by lecture and discussion methods. Some may require field work or internships for practical experience. Course work differs according to faith. Judeo-Christian programs may include:

Old Testament	Religious Education
New Testament	New Testament Greek
Church Doctrine	Homelitics (Art of Preaching)
Church History	Pastoral Counseling
Liturgy	Religious Music

Jewish theology programs may include:

Bible	Theology
Talmud	Education Classes
Rabbinic Literature	Pastoral Psychology
Jewish History	Public Speaking

---GRADUATION REQUIREMENTS: Requirements vary with school, program, and denomination. See college catalogs for more details.

---THINGS TO KNOW: Religious education programs do not prepare students to teach in public schools.

For a list of certification requirements, see PREP 8453, 8457 or contact your state Department of Education.

---RELATED PROGRAMS: PROG 592 Religion (for broad programs on world religions), 591 Philosophy, 314 Music (including programs in church music).

---DIRECTLY RELATED OCCUPATIONS: DESC 8435 Clergy.

ASSOCIATED OCCUPATIONS: DESC 8414 School Counselors, 8417 Social Workers, 8454 University and College Teachers, 8453 Elementary School Teachers, 8457 Secondary School Teachers.

---REFERENCES: For more information about Christian theology programs, write for a copy of the 'Directory of Theological Schools.' Cost: \$1.50 plus \$.60 for postage and handling, from the Association of Theological Schools, P.O. Box 130, Vandalia, OH 45377.

CIPS: 39.

SCHOOLS:

- - - - - 83001 BETHANY LUTHERAN JUNIOR COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE COLLEGE OFFERS A 'CHURCH SERVICE CURRICULUM' WHICH PREPARES STUDENTS FOR PARISH WORK, CHRISTIAN EDUCATION, AND YOUTH WORK. STUDENTS COMPLETE COURSES IN RELIGION, ENGLISH, PHYSICS, BIOLOGY, TYPING, ART, PSYCHOLOGY, SOCIOLOGY, EDUCATION, AND MUSIC. THEY MAY ALSO TAKE PART IN PRACTICAL WORK EXPERIENCES AT THE COLLEGE AND WITH MANKATO CONGREGATIONS.

--- DEGREES OFFERED: GRADUATES RECEIVE THE ASSOCIATE IN ARTS DEGREE OR THE JUNIOR COLLEGE DIPLOMA.

--- LENGTH OF PROGRAM: THIS IS A 2 YEAR PROGRAM.

- - - - - 83003 GOLDEN VALLEY LUTHERAN COLLEGE

--- OBJECTIVES OF THE PROGRAM: FOUR RELIGIOUS STUDIES PROGRAMS ARE OFFERED. THEY INCLUDE THE 'LIBERAL ARTS CURRICULUM WITH A CONCENTRATION IN BIBLICAL AND THEOLOGICAL STUDIES', WHICH COMBINES GENERAL STUDIES WITH A BACKGROUND IN THE BIBLE AND THEOLOGY; AND THE 'CHURCH STAFF WORK CURRICULUM', WHICH COMBINES LIBERAL ARTS WITH TRAINING AS A CHURCH STAFF WORKER, INCLUDING VISITATION, YOUTH WORK, EDUCATION, AND SECRETARIAL DUTIES. TWO 'WORLD MISSION' CURRICULA ARE ALSO OFFERED. BOTH ALLOW STUDENTS TO GAIN A BACKGROUND IN CHRISTIAN SERVICE AND MISSION WORK, BUT THE LONGER ONE ALSO PROVIDES A LIBERAL ARTS BACKGROUND. THESE TWO PROGRAMS PREPARE STUDENTS FOR FURTHER TRAINING IN MISSION VOCATIONS.

--- DEGREES OFFERED: ASSOCIATE IN ARTS DEGREES ARE OFFERED IN LIBERAL ARTS, CHURCH STAFF WORK, AND WORLD MISSION. THE SHORTER WORLD MISSION PROGRAM LEADS TO A ONE YEAR VOCATIONAL CERTIFICATE.

--- LENGTH OF PROGRAM: THE ASSOCIATE DEGREE PROGRAMS ARE 2 YEARS LONG, WHILE THE WORLD MISSION CERTIFICATE PROGRAM IS 1 YEAR LONG.

- - - - - 84014 NORTHWESTERN COLLEGE

--- OBJECTIVES OF THE PROGRAM: A ONE YEAR 'BIBLICAL ARTS' PROGRAM IS DESIGNED FOR STUDENTS WHO WISH CONCENTRATED TRAINING IN THE WORD OF GOD. ALL STUDENTS WHO ARE ENROLLED IN ANOTHER MAJOR PROGRAM MUST ALSO COMPLETE

THIS BIBLE PROGRAM. THE 4 YEAR 'MINISTRIES' PROGRAM AND THE 4 YEAR 'CHRISTIAN EDUCATION' PROGRAM PREPARE THE STUDENT FOR CAREERS IN THE CHURCH MINISTRY OR ON THE MISSION FIELD. THEY ALSO PROVIDE PREPARATION FOR SEMINARY OR GRADUATE STUDY. COURSES INCLUDE BIBLE HISTORY AND LITERATURE AS WELL AS DOCTRINE AND THE REQUIRED ELECTIVES.

--- DEGREES OFFERED: THE ONE YEAR PROGRAM OFFERS A CERTIFICATE IN BIBLICAL ARTS WHILE THE FOUR YEAR PROGRAM OFFER A BACHELOR OF ARTS DEGREE.

- - - - - 84015 PILLSBURY BAPTIST BIBLE COLLEGE

--- OBJECTIVES OF THE PROGRAM: ALL STUDENTS WHO ATTEND PILLSBURY MUST MAJOR IN THE 'BIBLE'. THE OBJECTIVES OF THE BIBLE PROGRAM ARE TO TRAIN STUDENTS IN AN UNDERSTANDING AND USE OF GOD'S WORD AS THE RULE OF FAITH AND PRACTICE. THERE IS ALSO A PRACTICAL 'CHRISTIAN SERVICE' PROGRAM FOR THOSE WHO WISH TO BECOME BETTER EQUIPPED AS SUNDAY SCHOOL TEACHERS OR YOUTH SPONSORS. ANYONE HOLDING A BACHELOR'S DEGREE FROM A SECULAR COLLEGE MAY ENROLL IN A 1 YEAR PROGRAM OF STUDY TO OBTAIN A BIBLE MAJOR AND GRADUATE WITH A BACHELOR OF ARTS IN THE BIBLE DEGREE. STUDENTS WHO HAVE AN R.N. DEGREE MAY TAKE COURSES LEADING TO A BACHELOR OF SCIENCE DEGREE IN BIBLE AND NURSING. ORDINARILY, STUDENTS TAKE 1 YEAR AT PILLSBURY BEFORE AND AFTER NURSES' TRAINING.

--- DEGREES OFFERED: A 2 YEAR PRACTICAL CHRISTIAN SERVICE DIPLOMA, A BACHELOR OF ARTS IN BIBLE, A BACHELOR OF SCIENCE IN BIBLE, AND A BACHELOR OF SCIENCE DEGREE IN BIBLE AND NURSING ARE OFFERED.

- - - - - 85004 SAINT PAUL SEMINARY

--- OBJECTIVES OF THE PROGRAM: THE 'MASTER OF DIVINITY' DEGREE PROGRAM IS A PROFESSIONAL PROGRAM FOR PEOPLE PREPARING FOR THE CHURCH MINISTRY. GRADUATES ARE EQUIPPED FOR THE PASTORAL MINISTRY. THE 'MASTER OF ARTS IN THEOLOGY' PROGRAM IS AN ACADEMIC DEGREE. PEOPLE PREPARING FOR ORDINATION TO THE ROMAN CATHOLIC PRIESTHOOD COMPLETE EITHER THE MDD OR MA DEGREE.

--- DEGREES OFFERED: STUDENTS MAY EARN EITHER THE MASTER OF DIVINITY DEGREE OR THE MASTER OF ARTS IN THEOLOGY DEGREE. NON-DEGREE OPPORTUNITIES FOR CONTINUING EDUCATION IN THEOLOGY ARE ALSO AVAILABLE.

Apprenticeship programs provide on-the-job training and related classroom instruction in a skilled craft or trade. Many occupations are currently covered in registered apprenticeship programs throughout the United States. Most are in the construction, manufacturing, transportation, and service industries. Apprenticeship training is the major way to prepare for some occupations, such as plumbers and electricians. For many other occupations, such as carpenters, bakers, and machinists, apprenticeship is one of several ways to gain training for entry level journey positions.

Apprenticeship programs usually include three to four years of training. Some programs, generally called 'training,' last one year or less. Other programs are as long as five years. During this time, apprentices work under a skilled craftworker (or journey person). Under the journey persons guidance, the apprentice learns the mechanics of a trade and gradually learns to perform the work under less and less supervision. Generally, 144 hours of related classroom instruction per year is also included in the training program. Classes are taught by journey instructors and are usually held at night through public educational facilities such as community colleges or vocational-technical schools. In some programs, this classroom instruction is completed before the apprentice is placed in an actual work situation.

Apprenticeship programs are sponsored by labor unions, employers, or a combination of the two. The sponsor plans, administers, and pays for the program. The worker (apprentice) signs a written employment agreement and is a paid, full-time employee of the company in which they are apprenticed. An apprentice's starting wage varies from 40% to 75% of the journey wage, with the average being about 50%. (Wages are never less than the state or federal minimum wage.) Wages are increased periodically until they equal the journey rate at the end of the apprenticeship. When apprentices finish their training, they receive a certificate of completion issued by the state apprenticeship agency or by the Bureau of Apprenticeship and Training.

---PROGRAM ADMISSION: Most apprenticeable trades have a local committee composed of management and labor that selects apprentices who meet the minimum standards. Requirements may vary by program, trade, and local committee, but most include:

- (1) a minimum age (usually 18);
- (2) a high school diploma or its equivalent;
- (3) an interview by the selection committee.

Some programs also require specific course work, a minimum grade point average, and the physical ability to work in a particular trade. Applicants may have to take an aptitude test.

Competition for apprenticeship openings in some trades and locations is keen. Committees give applicants points based on experience in the trade, knowledge of the trade, and grades in trade-related courses. Applicants with the highest number of points are selected for the program. Those selected often have more trade-related experience and education and higher grades than are required in the standards.

---TYPICAL COURSE WORK: Classroom instruction is designed to provide apprentices with knowledge in technical subjects related to their trade. Construction apprenticeships may include course work in blueprint reading, carpentry, iron work, and concrete work, for example. Generally, 144 hours of related classroom instruction is required during each year of appren-

ticeship training.

---GRADUATION REQUIREMENTS: The apprentice must show satisfactory progress both in job performance and related classroom instruction. To master a particular trade, an apprentice must learn and perfect each skill and bring those skills up to the speed and accuracy required of the job. A good attendance record is also important.

---THINGS TO KNOW: There is often a long period between selection and assignment to a job. In some trades, apprentices are responsible for finding their own job.

One construction trades study shows that apprentices get broader training than people who learn the trade informally.

Journey persons who were trained through formal apprenticeship programs may not receive higher wages than those trained informally on the job, but they work in the trade longer, and more of them become supervisors.

---RELATED PROGRAMS: PROG 288 Construction Trades, 399 Food Service, 295 Metalworking, 289 Woodworking, 292 Electricity and Electronics Repair, 318 Printing and Graphics, 287 Industrial Mechanics, 278 Gas and Diesel Mechanics, 271 Vehicle and Equipment Operation, 371 Optical Services.

Three types of additional apprenticeship information are available:

- (1) For a list of the Major Apprenticeable Occupations in Minnesota,

Type: app occs

- (2) For a list of Apprenticeship Offices Near You,

Type: app ofc

- (3) For General Apprenticeship Selection Committee Concerns and Questions,

Type: app q

SCHOOLS:

- - - - - 25001 ALBERT LEA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: STUDENTS ARE REQUIRED TO COMPLETE APPROVED INTERNSHIPS WITHIN A NUMBER OF TRAINING PROGRAMS.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED.

--- LENGTH OF PROGRAM: PROGRAMS VARY IN LENGTH.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: INTERNSHIPS AND ON-THE-JOB TRAINING PROGRAMS ARE OFFERED WITHIN A NUMBER OF PROGRAMS OF STUDY.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED.

--- LENGTH OF PROGRAM: INTERNSHIPS AND ON-THE-JOB TRAINING PROGRAMS VARY IN LENGTH ACCORDING TO THE SPECIFIC PROGRAM OF STUDY.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: INTERNSHIPS AND ON-THE-JOB TRAINING ARE OFFERED IN A NUMBER OF PROGRAMS.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAMS VARY IN LENGTH.

- - - - - 25004 AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: TRAINING PROGRAMS ARE OFFERED WITHIN MOST INSTRUCTIONAL AREAS.

--- DEGREES OFFERED: CERTIFICATES ARE OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAMS VARY IN LENGTH.

- - - - - 25005 BEMIDJI AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: TRAINING PROGRAMS AND INTERNSHIPS ARE OFFERED IN MANY OF THE PROGRAMS OF STUDY.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAMS VARY IN LENGTH.

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: INTERNSHIPS AND TRAINING PROGRAMS ARE OFFERED IN A NUMBER OF PROGRAMS OF STUDY.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAMS OF STUDY VARY IN LENGTH.

- - - - - 25007 CANBY AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: ON-THE-JOB TRAINING IS OFFERED IN A VARIETY OF PROGRAMS OF STUDY. SOME STUDENTS COMPLETE THEIR PROGRAMS BY EARNING CREDIT FOR WORK EXPERIENCE GAINED AFTER LEAVING SCHOOL.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAMS VARY IN LENGTH.

- - - - - 25010 DULUTH AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'BUILDING CONSTRUCTION (CARPENTRY)' AND 'COMMERCIAL AND RESIDENTIAL WIRING' PROGRAMS INCLUDE PRE-APPRENTICESHIP PREPARATION. THE 'ELECTRICAL TECHNOLOGY' PROGRAM OFFERS PRE-INDUSTRIAL APPRENTICESHIP PREPARATION. CO-OP WORK EXPERIENCE IS OFFERED FOR 2 PROGRAMS - 'FASHION MERCHANDISING' AND 'MARKETING AND SALES'.

--- DEGREES OFFERED: NO DEGREE IS OFFERED.

- - - - - 25014 HIBBING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CONSTRUCTION AND MAINTENANCE METAL TRADES' PROGRAM PROVIDES STUDENTS WITH PRE-APPRENTICESHIP TRAINING IN THE BASIC SKILLS REQUIRED IN MOST METAL CONSTRUCTION AND MAINTENANCE TRADES. THE COURSE INCLUDES 3 MONTHS TRAINING IN EACH OF 5 OCCUPATIONAL AREAS: SHEET METAL, PLUMBING AND PIPE-FITTING, WELDING, HEATING AND AIR CONDITIONING, AND REFRIGERATION, WITH ADDITIONAL CONCENTRATION OF THE LAST 3 MONTHS IN ANY OF THE OTHER 5 AREAS.

--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.

--- LENGTH OF PROGRAM: THREE MONTHS TRAINING IS REQUIRED FOR EACH OCCUPATIONAL AREA FOR A TOTAL OF 18 MONTHS.

- - - - - 25018 MINNEAPOLIS TECHICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: MANY OF THE PROGRAMS REQUIRE INTERNSHIPS WHICH GIVE STUDENTS ACTUAL ON-THE-JOB WORK EXPERIENCE UNDER SUPERVISED TRAINING CONDITIONS.

--- DEGREES OFFERED: STUDENTS WHO COMPLETE THESE PROGRAMS ARE AWARDED DIPLOMAS.

--- LENGTH OF PROGRAM: THESE PROGRAMS VARY IN LENGTH.

- - - - - 25019 MOORHEAD AREA VOCATIONAL TECHNICAL INSTITUTE
 --- OBJECTIVES OF THE PROGRAM: MANY OF THE PROGRAMS REQUIRE CLINICAL PRACTICE OR INTERNSHIPS WHICH ARE DESIGNED TO GIVE STUDENTS ACTUAL ON-THE-JOB WORK EXPERIENCE UNDER SUPERVISED TRAINING CONDITIONS.
 --- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS AWARDED TO THOSE WHO SUCCESSFULLY COMPLETE THESE PROGRAMS.
 --- LENGTH OF PROGRAM: THESE PROGRAMS VARY IN LENGTH.

- - - - - 25021 PIPESTONE AREA VOCATIONAL TECHNICAL INSTITUTE
 --- OBJECTIVES OF THE PROGRAM: MANY OF THE PROGRAMS REQUIRE INTERNSHIPS WHICH GIVE STUDENTS ACTUAL ON-THE-JOB WORK EXPERIENCE UNDER SUPERVISED TRAINING CONDITIONS.
 --- DEGREES OFFERED: STUDENTS COMPLETING THESE PROGRAMS WILL RECEIVE DEGREES OF OCCUPATIONAL PROFICIENCY.
 --- LENGTH OF PROGRAM: THESE PROGRAMS VARY IN LENGTH.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE
 --- OBJECTIVES OF THE PROGRAM: MANY OF THE PROGRAMS REQUIRE INTERNSHIPS WHICH ARE DESIGNED TO GIVE STUDENTS ACTUAL ON-THE-JOB WORK EXPERIENCE. SOME OF THESE PROGRAMS INCLUDE: FOODS, EDP, DENTAL LAB, CENTRAL SERVICE, NURSING ASSISTANT, CHILD DEVELOPMENT, INTENSIVE CARE PARAMEDIC, AND MOST OF THE TECHNICAL LAB PROGRAMS.
 --- DEGREES OFFERED: STUDENTS WHO COMPLETE THESE PROGRAMS RECEIVE A DIPLOMA OR DEGREE OF OCCUPATIONAL PROFICIENCY IN THE PROGRAM.
 --- LENGTH OF PROGRAM: THESE PROGRAMS VARY IN LENGTH.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE
 --- OBJECTIVES OF THE PROGRAM: MANY OF THE PROGRAMS REQUIRE STUDENTS TO COMPLETE CLINICAL PRACTICE OR INTERNSHIPS AS PART OF THEIR TRAINING. THESE GIVE STUDENTS ACTUAL ON-THE-JOB EXPERIENCE UNDER SUPERVISED TRAINING CONDITIONS.
 --- DEGREES OFFERED: A DIPLOMA IS AWARDED TO STUDENTS WHO SUCCESSFULLY COMPLETE EACH PROGRAM.
 --- LENGTH OF PROGRAM: THESE PROGRAMS VARY IN LENGTH.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE
 --- OBJECTIVES OF THE PROGRAM: RELATED TRAINING FOR INDENTURED APPRENTICES IS OFFERED IN THE FIELDS OF CARPENTRY, PLUMBING, ELECTRICAL WORK, AND SHEET METAL. SOME TRAINING PROGRAMS INCLUDE INTERNSHIPS.
 --- DEGREES OFFERED: A CERTIFICATE IS OFFERED FOR COMPLETION OF EACH PROGRAM.
 --- LENGTH OF PROGRAM: LENGTHS OF COURSES AND TRAINING EXPERIENCES VARY.
 --- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE
 --- OBJECTIVES OF THE PROGRAM: THIS SCHOOL OFFERS 'APPRENTICESHIP TRADE EXTENSION' CLASSES. THESE CLASSES PROVIDE RELATED TRAINING FOR APPRENTICES. COURSE CONTENT SUPPLEMENTS WHAT APPRENTICES LEARN DAILY ON THEIR JOBS AND IS DETERMINED BY A JOINT APPRENTICESHIP COMMITTEE WITH THE ASSISTANCE OF THE SCHOOL ADVISORY COMMITTEE.
 --- DEGREES OFFERED: STUDENTS RECEIVE CERTIFICATES OF COMPLETION.
 --- LENGTH OF PROGRAM: TOTAL CLASS LENGTH VARIES.

- - - - - 25026 STAPLES AREA VOCATIONAL TECHNICAL INSTITUTE
 --- OBJECTIVES OF THE PROGRAM: STUDENTS MAY RECEIVE CREDIT FOR EXTRA HOURS

OF ON-THE-JOB TRAINING IF THEY HAVE JOBS WHICH ARE RELATED TO THEIR COURSE OF STUDY.

--- DEGREES OFFERED: WHEN STUDENTS COMPLETE A PROGRAM, THEY ARE AWARDED A DIPLOMA OR A TRADE CERTIFICATE.

--- LENGTH OF PROGRAM: THE LENGTH OF ON-THE-JOB TRAINING VARIES.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: ON-THE-JOB TRAINING IS OFFERED IN A NUMBER OF PROGRAMS OF STUDY.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED.

--- LENGTH OF PROGRAM: THE PROGRAMS VARY IN LENGTH.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25028 THIEF RIVER FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: SOME PROGRAMS INCLUDE INTERNSHIP EXPERIENCES. IN ADDITION, STUDENTS ARE SOMETIMES RELEASED FROM A PROGRAM BEFORE THEY COMPLETE THE TOTAL HOURS IF THEY ARE ENTERING RELEVANT JOBS. IN EFFECT, THESE STUDENTS ARE GIVEN CREDIT FOR ON-THE-JOB TRAINING.

--- DEGREES OFFERED: WHEN THEY COMPLETE A TRAINING PROGRAM, STUDENTS RECEIVE A DEGREE OF OCCUPATIONAL PROFICIENCY.

--- LENGTH OF PROGRAM: THE LENGTHS OF INTERNSHIPS VARY FROM PROGRAM TO PROGRAM. THE LENGTH OF ON-THE-JOB TRAINING DIFFERS FROM STUDENT TO STUDENT.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: SOME PROGRAMS INCLUDE INTERNSHIP EXPERIENCES. STUDENTS ARE SOMETIMES GIVEN CREDIT FOR ON-THE-JOB TRAINING EXPERIENCES.

--- DEGREES OFFERED: STUDENTS WHO COMPLETE A PROGRAM OF STUDY RECEIVE A DEGREE OF OCCUPATIONAL PROFICIENCY OR A CERTIFICATE.

--- LENGTH OF PROGRAM: THE LENGTH OF THESE TRAINING EXPERIENCES VARIES.

- - - - - 25031 WINONA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'PRACTICAL NURSING' AND 'SALES AND MANAGEMENT' PROGRAMS BOTH REQUIRE CLINICAL EXPERIENCE OR AN INTERNSHIP AS PART OF THEIR TRAINING. THESE PROGRAMS ARE DESIGNED TO GIVE STUDENTS ACTUAL ON-THE-JOB WORK EXPERIENCE UNDER SUPERVISED TRAINING CONDITIONS.

--- DEGREES OFFERED: STUDENTS WHO COMPLETE THESE PROGRAMS ARE AWARDED A VOCATIONAL DIPLOMA.

--- LENGTH OF PROGRAM: PRACTICAL NURSING IS AN 11 MONTH PROGRAM, WHILE SALES AND MANAGEMENT TAKES 9 MONTHS TO COMPLETE.

- - - - - 25032 EAST GRAND FORKS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GENERAL CONSTRUCTION' PROGRAM IS A PRE-APPRENTICESHIP PROGRAM THAT PREPARES STUDENTS FOR CAREERS IN THE CONSTRUCTION INDUSTRY. OTHER PROGRAMS OFFER INTERNSHIPS AND ON-THE-JOB TRAINING COURSES. INCLUDED IN THE CURRICULUM ARE COURSES IN ESTIMATING, DRAFTING AND BLUEPRINT READING.

--- DEGREES OFFERED: STUDENTS WHO COMPLETE AN APPROVED PROGRAM RECEIVE A CERTIFICATE OF COMPETENCY.

--- LENGTH OF PROGRAM: THE GENERAL CONSTRUCTION PROGRAM IS 9 MONTHS LONG.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE \$300 FOR BOOKS, SUPPLIES, EQUIPMENT, AND OTHER COSTS.

- - - - - 25033 RED WING AREA VOCATIONAL TECHNICAL INSTITUTE
 --- OBJECTIVES OF THE PROGRAM: MANY OF THE PROGRAMS REQUIRE INTERNSHIPS OR CLINICAL PRACTICE WHICH GIVE STUDENTS ACTUAL ON-THE-JOB WORK EXPERIENCE UNDER SUPERVISED TRAINING CONDITIONS.
 --- DEGREES OFFERED: STUDENTS WHO COMPLETE VOCATIONAL PROGRAMS, INCLUDING REQUIRED ON-THE-JOB EXPERIENCES RECEIVE DEGREES OF OCCUPATIONAL PROFICIENCY.
 --- LENGTH OF PROGRAM: THESE PROGRAMS VARY IN LENGTH.

- - - - - 26176 METROPOLITAN STATE UNIVERSITY
 --- OBJECTIVES OF THE PROGRAM: THE STUDENT INTERNSHIP PROGRAM PROVIDES STUDENTS WITH DIRECT LEARNING EXPERIENCES. INTERNSHIP OPPORTUNITIES ARE AVAILABLE, AS A STUDENT OPTION, IN A WIDE VARIETY OF FIELDS.
 --- DEGREES OFFERED: NO DEGREES ARE OFFERED, BUT INTERNSHIP EXPERIENCES MAY BE EVALUATED IN ESTABLISHING COMPETENCIES NEEDED FOR GRADUATION.

- - - - - 27140 BRAINERD COMMUNITY COLLEGE
 --- OBJECTIVES OF THE PROGRAM: STUDENTS IN THE 'CHILD DEVELOPMENT' PROGRAM ARE REQUIRED TO COMPLETE FIELD EXPERIENCES. STUDENTS MAY GAIN CREDIT FOR FIELD EXPERIENCE BY TAKING INTERNSHIP COURSES IN THE MASS MEDIA AND HUMAN SERVICES AREA. THESE EXPERIENCES ARE DESIGNED TO INTRODUCE STUDENTS TO THE TYPE OF WORK THEY WILL BE PERFORMING AFTER GRADUATION.
 --- DEGREES OFFERED: THE PRACTICAL TRAINING EXPERIENCES ARE PART OF THE ASSOCIATE IN SCIENCE PROGRAM IN CHILD DEVELOPMENT.
 --- LENGTH OF PROGRAM: THE PROGRAMS VARY IN LENGTH AND IN THE AMOUNT OF TIME REQUIRED PER EXPERIENCE.

- - - - - 27145 WILLMAR COMMUNITY COLLEGE
 --- OBJECTIVES OF THE PROGRAM: A 'COOPERATIVE EDUCATION EXPERIENCE' IS AVAILABLE TO STUDENTS IN THE FIELD OF HUMAN SERVICES AND OTHER SELECTED AREAS. THE PRIMARY OBJECTIVE IS TO PROVIDE THE STUDENT WITH A COMBINATION OF FIELD EXPERIENCE, ALTERNATED WITH ACADEMIC STUDY, TO PROVIDE A MORE MEANINGFUL EDUCATION. THE PRACTICAL EXPOSURE MAKES THE FIELD EXPERIENCE RELEVANT TO STUDENTS' LONG RANGE OCCUPATIONAL GOALS.
 --- DEGREES OFFERED: THE DEGREE WOULD DEPEND ON THE MAJOR CHOSEN.
 --- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAM WOULD DEPEND ON THE MAJOR CHOSEN.

- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE
 --- OBJECTIVES OF THE PROGRAM: THE 'COOPERATIVE EDUCATION' PROGRAM PLACES STUDENTS IN OFF-CAMPUS WORK SITUATIONS IN ORDER TO PROVIDE PRACTICAL CAREER PREPARATION. THE PROGRAM ATTEMPTS TO INTEGRATE CLASSROOM THEORY WITH PRACTICAL FIELD EXPERIENCE.
 --- DEGREES OFFERED: NONE. STUDENTS MAY EARN UP TO 12 CREDITS THROUGH THIS PROGRAM.
 --- LENGTH OF PROGRAM: THE LENGTH OF THE COOPERATIVE EDUCATION EXPERIENCE VARIES BUT IS USUALLY 1 QUARTER LONG.

- - - - - 27149 NORTHLAND COMMUNITY COLLEGE
 --- OBJECTIVES OF THE PROGRAM: THE 'COOPERATIVE EDUCATION' PROGRAM INCORPORATES ACADEMIC STUDY AND WORK EXPERIENCE FOR STUDENTS WHO MAY SEEK CAREERS IN HUMAN SERVICES. STUDENTS WHO ARE ACCEPTED TO THE PROGRAM EARN SIX OR TWELVE CREDITS FOR COMPLETING THEIR INTERNSHIP WITH THE COOPERATING AGENCY.
 --- DEGREES OFFERED: THE CREDITS EARNED FOR A COOPERATIVE EDUCATION

ASSIGNMENT MAY BE APPLIED TO THE STUDENT'S DEGREE PROGRAM.

--- LENGTH OF PROGRAM: THE INTERNSHIPS ARE USUALLY HALF OR FULL TIME ASSIGNMENTS LASTING 1 QUARTER.

- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'COOPERATIVE EDUCATION' PROGRAM GIVES STUDENTS A REALISTIC INTRODUCTION TO POTENTIAL CAREERS THROUGH ON-THE-JOB EXPERIENCES. STUDENTS MAY CHOOSE THEIR FIELD OF INTEREST AND SELECT AN AGENCY THAT WILL PROVIDE GOOD WORKING EXPERIENCE WITHIN THAT FIELD. STUDENTS MAY EARN EITHER SIX OR TWELVE CREDITS WHICH CAN BE APPLIED AS ELECTIVE CREDITS IN THEIR DEGREE PROGRAM.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED, BUT STUDENTS MAY EARN CREDITS WHICH CAN BE APPLIED TOWARD A DEGREE.

--- LENGTH OF PROGRAM: EACH TRAINING EXPERIENCE IS 1 QUARTER LONG. STUDENTS WORK 15 OR 30 HOURS PER WEEK DURING THE QUARTER, DEPENDING ON THE NUMBER OF CREDITS THEY ARE SEEKING.

- - - - - 27156 NORMANDALE COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: STUDENTS MAY EARN SIX OR TWELVE CREDITS PER QUARTER THROUGH THE 'COOPERATIVE EDUCATION' PROGRAM. THOSE WHO ENROLL IN THIS PROGRAM PARTICIPATE IN ON-CAMPUS SEMINARS AND PART- OR FULL-TIME SUPERVISED WORK AND TRAINING AT AN APPROVED COMMUNITY AGENCY.

--- DEGREES OFFERED: NO DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: EACH COOPERATIVE EDUCATION EXPERIENCE IS 1 QUARTER LONG.

- - - - - 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: TO FULFILL THE DEGREE REQUIREMENTS AT THIS SCHOOL, A STUDENT MUST COMPLETE AN 'INTERNSHIP' PROGRAM. SIX CREDITS ARE USUALLY EARNED DURING THE INTERNSHIP. THE INTERNSHIP UNIT MAY BE COMPLETED THROUGH AN ON-THE-JOB EXPERIENCE, AN ADDED SEQUENCE OF SELECTED COURSES, OR UNIQUE LABORATORY EXPERIENCES OR SPECIAL PROJECTS.

--- DEGREES OFFERED: NO DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: STUDENTS USUALLY DEVOTE 1 QUARTER TO COMPLETING THEIR INTERNSHIP.

- - - - - 81005 UNIVERSITY OF MINNESOTA-WASECA TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'PREOCCUPATIONAL PREPARATION UNIT' ENABLES STUDENTS TO OBTAIN ADDITIONAL TRAINING AS A MEANS OF PREPARING THEM TO BECOME MORE ACCEPTABLE TO INDUSTRY WITHIN THEIR MAJOR FIELD. STUDENTS MUST COMPLETE THIS PROGRAM TO EARN THE ASSOCIATE IN APPLIED SCIENCE DEGREE.

--- DEGREES OFFERED: NO DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: STUDENTS USUALLY DEVOTE 1 QUARTER TO COMPLETING THEIR INTERNSHIP. AT LEAST 12 WEEKS OF EMPLOYMENT ARE REQUIRED FOR AN ON-THE-JOB INTERNSHIP.

- - - - - 82009 DUNWOODY INDUSTRIAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'APPRENTICE' PROGRAM IS OFFERED IN EVENING SCHOOL. STUDENTS COMPLETE RELATED CLASSROOM STUDIES ACCORDING TO THEIR CHOICE OF CAREER. APPLICANTS MUST FIRST BE APPROVED BY THE JOINT APPRENTICESHIP COMMITTEE (JAC) OF THE LOCAL UNION INVOLVED.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS OFFERED.

--- LENGTH OF PROGRAM: THE LENGTH VARIES DEPENDING ON CAREER CHOSEN.

--- SPECIAL COSTS: PROGRAM COSTS AND LAB FEES ARE INCLUDED IN THE TUITION. TEXTBOOK COSTS VARY WITH THE PROGRAM.

- - - - - 84007 GUSTAVUS ADOLPHUS COLLEGE

--- OBJECTIVES OF THE PROGRAM: TWO 'INTERNSHIP' PROGRAMS ARE OFFERED: A JANUARY CAREER EXPLORATION PROVIDES AN OBSERVATIONAL/ LEARNING EXPERIENCE FOR FOUR WEEKS. A FULL SEMESTER INTERSHIP ALLOWS STUDENTS TO GAIN CREDIT IN A RELATED FIELD FOR ON-THE-JOB EXPERIENCES WHICH ARE COMPLEMENTED BY ACADEMIC ASSIGNMENTS. THE EDUCATION DEPARTMENT ALSO OFFERS A FULL SEMESTER FOR STUDENT TEACHING.

--- DEGREES OFFERED: CREDITS EARNED THROUGH INTERNSHIP EXPERIENCES MAY BE APPLIED TO STUDENTS' DEGREE PROGRAMS.

- - - - - 84008 HAMLINE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: STUDENTS MAY ARRANGE FOR AN 'INTERNSHIP' AS A MEANS OF EXPLORING POSSIBLE CAREER CHOICES. THESE INTERNSHIPS INVOLVE OFF-CAMPUS WORKING/LEARNING EXPERIENCES, USUALLY IN BUSINESS, GOVERNMENT, INDUSTRY, OR PUBLIC SERVICE. STUDENTS INTERESTED IN THESE OPPORTUNITIES DISCUSS THEIR PLANS WITH THEIR ADVISOR AND THE DIRECTOR OF THE CAREER STUDIES AND PLACEMENT CENTER. AN INTERNSHIP LEARNING CONTRACT IS THEN DEVELOPED AND ARRANGEMENTS FOR THE INTERNSHIP ARE MADE.

--- DEGREES OFFERED: THROUGH INTERNSHIPS STUDENTS MAY EARN CREDIT WHICH CAN BE APPLIED TO THEIR DEGREE PROGRAMS.

- - - - - 84012 MINNESOTA BIBLE COLLEGE

--- OBJECTIVES OF THE PROGRAM: STUDENTS IN THE 'MINISTERIAL' PROGRAMS MAY TAKE ADVANTAGE OF 'INTERNSHIP' EXPERIENCES OFFERED THEM BY VARIOUS CHURCHES IN THE AREA. THESE INTERNSHIPS ARE GENERALLY OFFERED DURING THE SUMMER MONTHS, AND MAY OR MAY NOT BE TAKEN FOR CREDIT DEPENDING UPON THE STUDENT'S NEEDS.

--- DEGREES OFFERED: A BACHELOR OF ARTS IS OFFERED WITH MAJORS IN CHRISTIAN EDUCATION, PRE-SEMINARY, THEOLOGY OR MUSIC.

- - - - - 84016 COLLEGE OF SAINT BENEDICT

--- OBJECTIVES OF THE PROGRAM: 'PROFESSIONAL INTERNSHIPS' ARE AVAILABLE IN MANY MAJOR FIELDS AND MAY REQUIRE A FULL-TIME COMMITMENT FOR ONE SEMESTER OR SUMMER. THE INTERNSHIP WORK EXPERIENCES ARE AVAILABLE IN ONE OR MORE ORGANIZATIONS OR FIELD PLACEMENTS. INTERNSHIPS ARE ARRANGED WITH THE ASSISTANCE OF THE DIRECTOR OF PLACEMENT AND INTERNSHIPS. ENROLLMENT IN A PRE-INTERNSHIP SEMINAR IN THE PRECEDING SEMESTER IF REQUIRED.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED, HOWEVER, CREDITS MAY BE APPLIED TO A CHOSEN MAJOR.

- - - - - 84018 SAINT JOHN'S UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: 'PROFESSIONAL INTERNSHIPS' ARE AVAILABLE IN MANY MAJOR FIELDS AND MAY REQUIRE A FULL-TIME COMMITMENT FOR ONE SEMESTER OR SUMMER. THE INTERNSHIP WORK EXPERIENCES ARE AVAILABLE IN 1 OR MORE ORGANIZATIONS OR FIELD PLACEMENTS. INTERNSHIPS ARE ARRANGED WITH THE ASSISTANCE OF THE DIRECTOR OF PLACEMENT AND INTERNSHIPS. ENROLLMENT IN A PRE-INTERNSHIP SEMINAR IN THE PRECEDING SEMESTER IS REQUIRED.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED, HOWEVER, CREDITS MAY BE APPLIED TO A CHOSEN MAJOR.

- - - - - 84019 SAINT MARY'S COLLEGE

--- OBJECTIVES OF THE PROGRAM: 'INTERNSHIPS' ARE OFFERED IN MANY DEGREE PROGRAMS. THESE ARE AVAILABLE AT VARIOUS AGENCIES AND INSTITUTIONS. THEY ALLOW STUDENTS TO GAIN PRACTICAL EXPERIENCE IN THEIR AREA OF STUDY.

--- DEGREES OFFERED: NO DEGREE IS OFFERED, HOWEVER, CREDITS EARNED MAY

APPLY TO A CHOSEN MAJOR.

- - - - - 84024 COLLEGE OF ST. THOMAS

--- OBJECTIVES OF THE PROGRAM: ALL DEPARTMENTS OFFER 'EXPERIENTIAL LEARNING' COURSES FOR THOSE STUDENTS WHO WISH TO RECEIVE CREDIT FOR OFF-CAMPUS LEARNING EXPERIENCES. JUNIOR AND SENIOR STUDENTS MAY SEEK APPROVAL FOR PROPOSED PROJECTS FROM THE DEPARTMENT CHAIRPERSON.

--- DEGREES OFFERED: NO DEGREE IS OFFERED, HOWEVER, CREDIT EARNED MAY BE APPLIED TO THE STUDENT'S DEGREE PROGRAM.

- - - - - 85005 UNITED THEOLOGICAL SEMINARY OF THE TWIN CITIES

--- OBJECTIVES OF THE PROGRAM: PROGRAMS ARE PROVIDED TO GIVE THE STUDENT THE OPPORTUNITY OF AN 'INTERNSHIP' EXPERIENCE WITH ANY OF A NUMBER OF RELIGIOUS OR RELIGIOUS AFFILIATED ORGANIZATIONS. ON-SITE FIELD EXPERIENCES ARE REQUIRED IN THE DOCTOR OF MINISTRY AND MASTER OF DIVINITY PROGRAMS.

--- DEGREES OFFERED: NO DEGREE IS OFFERED, HOWEVER, STUDENTS MAY USE THESE EXPERIENCES IN FULFILLING DEGREE REQUIREMENTS.

- - - - - 85013 MAYO SCHOOL OF HEALTH RELATED SCIENCES

--- OBJECTIVES OF THE PROGRAM: THESE 'TRAINING' PROGRAMS OFFER TO STUDENTS PRACTICAL CLINICAL EXPERIENCE IN THE FOLLOWING FIELDS: OCCUPATIONAL THERAPY, PSYCHOLOGY, RESPIRATORY THERAPY, RECREATION THERAPY AND NUCLEAR MEDICINE TECHNOLOGY. THESE PROGRAMS LAST FROM THREE MONTHS TO ONE YEAR AND HAVE DIFFERENT ENTRANCE REQUIREMENTS. CONTACT THE SCHOOL FOR MORE SPECIFIC INFORMATION ON THESE PROGRAMS.

--- DEGREES OFFERED: CERTIFICATES ARE AWARDED IN THE PSYCHOLOGY, AND NUCLEAR MEDICINE TECHNOLOGY PROGRAMS. THE OTHER PROGRAMS OFFER NO CERTIFICATES.

MAJOR APPRENTICEABLE OCCUPATIONS IN MINNESOTA

INFORMATION ABOUT APPRENTICESHIP FOR THE FOLLOWING OCCUPATIONS IS AVAILABLE IN THE CIS DESCRIPTION AND PREPARATION FILES.

- AUTO MECHANICS (SEE PREP 3112 AUTOMOBILE MECHANICS)
- BAKERS (SEE PREP 4324 BAKERS)
- BOILERMAKERS (SEE PREP 5483 BOILERMAKERS)
- BRICKLAYERS (SEE PREP 4264 BRICKLAYERS)
- CABINETMAKERS (SEE PREP 4586 CABINETMAKERS)
- CARPENTERS (SEE PREP 4254 CARPENTERS)
- CEMENT MASONS (SEE PREP 4246 CEMENT MASONS)
- COOKS (SEE PREP 7824 CHEFS AND DINNER COOKS, AND 7826 FRY COOKS)
- DENTAL TECHNICIANS (SEE PREP 2655 DENTAL LABORATORY TECHNICIANS)
- DRYWALL APPLICATORS (SEE PREP 4244 PLASTERERS AND DRYWALL INSTALLERS)
- ELECTRICIANS (SEE PREP 5626 ELECTRICIANS)
- FIREFIGHTERS (SEE PREP 9426 FIREFIGHTERS)
- FLOORCOVERERS (SEE PREP 4276 FLOOR AND CARPET LAYERS)
- GLAZIERS (SEE PREP 4248 GLAZIERS)
- GRAPHIC ARTS WORKERS (SEE PREP 4766 PRINTING PRODUCTION OCCUPATIONS)
- IRONWORKERS (SEE PREP 5482 IRONWORKERS)
- LANDSCAPERS (SEE PREP 4144 GROUNDSKEEPERS AND GARDENERS)
- LATHERS (SEE PREP 4244 PLASTERERS AND DRYWALL INSTALLERS)
- LITHOGRAPHER (SEE PREP 4767 PRINTING PRESS OPERATORS)
- MACHINISTS (SEE PREP 5464 MACHINISTS)
- MEAT CUTTERS (SEE PREP 4326 MEAT CUTTERS)

- MECHANICS, AUTOMOBILE (SEE PREP 3112 AUTOMOBILE MECHANICS)
- MECHANICS, HEAVY EQUIPMENT (SEE PREP 3114 TRUCK AND HEAVY EQUIPMENT MECHANICS AND PREP 3115 FARM EQUIPMENT MECHANICS)
- MECHANICS, INDUSTRIAL TRUCK (SEE PREP 3114 TRUCK AND HEAVY EQUIPMENT MECHANICS)
- MILLWRIGHTS (SEE PREP 3142 MILLWRIGHTS)
- MOLDERS AND COREMAKERS (SEE PREP 5424 MOLDERS)
- OPERATING ENGINEERS (SEE PREP 6151 HEAVY EQUIPMENT OPERATORS, 3114 TRUCK AND HEAVY EQUIPMENT MECHANICS, 5492 WELDERS)
- OPTICAL TECHNICIANS (SEE PREP 2656 OPTICIANS)
- PAINTERS (SEE PREP 4242 PAINTERS)
- PATTERNMAKERS (SEE PREP 5422 METALWORKING PATTERNMAKERS)
- PILEDRIERS (SEE PREP 6151 HEAVY EQUIPMENT OPERATORS)
- PIPEFITTERS (SEE PREP 4274 PLUMBERS AND PIPEFITTERS)
- PLASTERERS (SEE PREP 4244 PLASTERERS AND DRYWALL INSTALLERS)
- PLUMBERS (SEE PREP 4274 PLUMBERS AND PIPEFITTERS)
- POWERLINEPERSON (SEE PREP 5624 LINEPERSONS)
- POWER PLANT OPERATORS (SEE PREP 5944 STATIONARY ENGINEERS)
- ROOFER (SEE PREP 4278 ROOFERS)
- SHEET METAL WORKERS (SEE PREP 5484 SHEET METAL WORKERS)
- STATIONARY ENGINEERS (SEE PREP 5944 STATIONARY ENGINEERS)
- STEAMFITTERS (SEE PREP 4274 PLUMBERS AND PIPEFITTERS)
- TAPERS/DRYWALL FINISHERS (SEE PREP 4244 PLASTERERS AND DRYWALL INSTALLERS)
- TELEVISION, RADIO, AND HOME ENTERTAINMENT REPAIR (SEE PREP 3168 RADIO AND TELEVISION SERVICE TECHNICIANS)
- TILE SETTERS (SEE PREP 4264 BRICKLAYERS)

THERE ARE OTHER OCCUPATIONS THAT HAVE APPRENTICESHIP PROGRAMS AVAILABLE IN MINNESOTA. COMPETITION MAY BE KEEN FOR APPRENTICESHIPS IN SOME TRADES.

---HOW TO APPLY FOR APPRENTICESHIP

- (1) VOCATIONAL SCHOOL STUDENTS MAY BE HELPED IN APPRENTICEABLE PLACEMENT BY THEIR SCHOOL.
- (2) THE EMPLOYER, IN SOME INSTANCES, IS THE FIRST PERSON TO CONTACT. YOU MAY ALSO GET STARTED WITH THE HELP OF A JOINT APPRENTICESHIP COMMITTEE, A UNION, AN EMPLOYERS ORGANIZATION, A HIGH SCHOOL OR VOCATIONAL SCHOOL COUNSELOR, OR ONE OF THE GOVERNMENTAL ORGANIZATIONS LISTED BELOW.
- (3) CHECK THE YELLOW PAGES OF THE TELEPHONE BOOK FOR EMPLOYERS AND APPLY FOR APPRENTICEABLE WORK.
- (4) THE FOLLOWING ARE GOVERNMENTAL SERVICE ORGANIZATIONS WHICH YOU MAY WISH TO CONTACT FOR INFORMATION ABOUT APPRENTICESHIPS AGREEMENT.

DIVISION OF VOLUNTARY APPRENTICESHIP
 MINNESOTA DEPARTMENT OF LABOR AND INDUSTRY
 444 LAFAYETTE ROAD, FIFTH FLOOR
 SPACE CENTER BUILDING
 ST. PAUL, MINNESOTA 55101
 PHONE: 612-296-2371

BUREAU OF APPRENTICESHIP AND TRAINING
 U.S. DEPARTMENT OF LABOR
 134 FEDERAL BUILDING

316 ROBERT STREET
ST. PAUL, MINNESOTA 55101
PHONE: 612-725-7951

A GUIDE TO GENERAL APPRENTICESHIP SELECTION COMMITTEE CONCERNS AND QUESTIONS

FOR MANY APPRENTICESHIP PROGRAMS, APPLICANTS ARE INTERVIEWED BY A SELECTION COMMITTEE. THE FOLLOWING LISTS SOME GENERAL CONCERNS OF COMMITTEES, HINTS AND HOW APPLICANTS CAN DEAL WITH THOSE CONCERNS, AND EXAMPLES OF QUESTIONS THAT MAY BE ASKED DURING THE INTERVIEW. (NOTE: THE SPECIFIC CONCERNS AND THE ACTUAL QUESTIONS WILL VARY WITH THE TRADE AND THE COMMITTEE. TO MEET FEDERAL REQUIREMENTS FOR EQUAL EMPLOYMENT OPPORTUNITY AND AFFIRMATIVE ACTION, A COMMITTEE FOR A SPECIFIC APPRENTICESHIP ACTION, A COMMITTEE FOR A SPECIFIC APPRENTICESHIP PROGRAM WILL ASK ALL APPLICANTS THE SAME QUESTIONS.)

THERE ARE SEVERAL THINGS COMMITTEE MEMBERS WANT TO KNOW ABOUT:

(1) DESIRE AND PERSISTENCE

- EXPLAIN WHY YOU WANT TO ENTER THE TRADE.
- TELL HOW YOU BECAME INTERESTED IN THE TRADE.
- LET THE COMMITTEE KNOW IF YOU HAVE EVER APPLIED TO THIS OR ANY OTHER TRADE BEFORE.

(2) KNOWLEDGE OF TRADE

- DO SOME HOMEWORK ON THE TRADE. OBSERVE THE WORKERS AND SEE THE ENVIRONMENT YOU'D BE WORKING IN.
- DESCRIBE SOME OF THE JOBS THE WORKERS PERFORM.
- TALK ABOUT THE TOOLS AND EQUIPMENT USED IN THE TRADE.
- KNOW HOW LONG THE APPRENTICESHIP PROGRAM IS.
- KNOW WHAT THE APPRENTICESHIP AND THE JOURNEY PAY SCALES ARE.
- DO SOME HOMEWORK ON OTHER TRADES, TOO. SHOW YOU'VE BEEN EXPOSED TO MANY OTHER TRADES AND EXPLAIN YOUR REASON FOR CHOOSING THIS PARTICULAR TRADE OVER OTHERS.

FOR A LIST OF APPRENTICESHIP OFFICES NEAR YOU,
TYPE: APP OFC

FOR GENERAL APPRENTICESHIP SELECTION COMMITTEE CONCERNS AND QUESTIONS,
TYPE: APP Q

APPRENTICESHIP OFFICES NEAR YOU

CONTACT THE FOLLOWING OFFICE NEAREST YOU FOR ADDITIONAL INFORMATION:

ST. PAUL - DIVISION OF VOLUNTARY APPRENTICESHIP
MINNESOTA DEPARTMENT OF LABOR AND INDUSTRY
444 LAFAYETTE ROAD, FIFTH FLOOR
SPACE CENTER BUILDING
ST. PAUL, MINNESOTA 55101
(PHONE: 612-296-2371)

BUREAU OF APPRENTICESHIP AND TRAINING
U.S. DEPARTMENT OF LABOR
134 FEDERAL BUILDING
316 ROBERT STREET
ST. PAUL, MINNESOTA 55101
(PHONE: 612-725-7951)

STATE OF MINNESOTA EMPLOYMENT DIVISION OFFICES MAY ALSO HAVE APPRENTICESHIP INFORMATION.

FOR A LIST OF THE MAJOR APPRENTICEABLE OCCUPATIONS IN MINNESOTA.
TYPE: APP OCCS

FOR GENERAL APPRENTICESHIP SELECTION COMMITTEE CONCERNS AND QUESTIONS,
TYPE: APP Q

GENERAL APPRENTICESHIP SELECTION COMMITTEE
CONCERNS AND QUESTIONS

FOR MANY APPRENTICESHIP PROGRAMS, APPLICANTS ARE INTERVIEWED BY A SELECTION COMMITTEE. THE FOLLOWING LISTS SOME GENERAL CONCERNS OF COMMITTEES, HINTS ON HOW APPLICANTS CAN DEAL WITH THOSE CONCERNS, AND EXAMPLES OF QUESTIONS THAT MAY BE ASKED DURING THE INTERVIEW. (NOTE: THE SPECIFIC CONCERNS AND THE ACTUAL QUESTIONS WILL VARY WITH THE TRADE AND THE COMMITTEE. TO MEET FEDERAL REQUIREMENTS FOR EQUAL EMPLOYMENT OPPORTUNITY AND AFFIRMATIVE ACTION, A COMMITTEE FOR A SPECIFIC APPRENTICESHIP PROGRAM WILL ASK ALL APPLICANTS THE SAME QUESTIONS.)

THERE ARE SEVERAL THINGS COMMITTEE MEMBERS WANT TO KNOW ABOUT:

1. DESIRE AND PERSISTENCE
 - EXPLAIN WHY YOU WANT TO ENTER THE TRADE.
 - TELL HOW YOU BECAME INTERESTED IN THE TRADE.
 - LET THE COMMITTEE KNOW IF YOU HAVE EVER APPLIED TO THIS OR ANY OTHER TRADE BEFORE.
2. KNOWLEDGE OF THE TRADE
 - DO SOME HOMEWORK ON THE TRADE. OBSERVE THE WORKERS AND SEE THE ENVIRONMENT YOU'D BE WORKING IN.
 - DESCRIBE SOME OF THE JOBS THE WORKERS PERFORM.
 - TALK ABOUT THE TOOLS AND EQUIPMENT USED IN THE TRADE.
 - KNOW HOW LONG THE APPRENTICESHIP PROGRAM IS.
 - KNOW WHAT THE APPRENTICESHIP AND THE JOURNEY PAY SCALES ARE.
 - DO SOME HOMEWORK ON OTHER TRADES, TOO. SHOW YOU'VE BEEN EXPOSED TO MANY OTHER TRADES AND EXPLAIN YOUR REASONS FOR CHOOSING THIS PARTICULAR TRADE OVER OTHERS.
3. QUALIFICATIONS FOR THE APPRENTICESHIP PROGRAM
 - SHOW THAT YOU KNOW ALL THE QUALIFICATIONS FOR ENTERING THE PROGRAM.
 - IF YOU DO NOT MEET ALL THE QUALIFICATIONS, LET THE COMMITTEE KNOW WHAT YOU ARE DOING SO THAT YOU WILL (FOR EXAMPLE, TAKING PARTS OF THE GED OR ENROLLING IN A GEOMETRY CLASS).

4. WORK EXPERIENCE

- DESCRIBE ANY WORK EXPERIENCE THAT MAY BE RELATED TO THE TRADE OR THAT MAY HAVE PROVIDED EXPOSURE TO THE TRADE.
- RELATE ANY EXPERIENCE WHERE YOU HAVE A FAVORABLE WORK RECORD (GOOD REFERENCES, ATTENDANCES, AND LONG-TERM EMPLOYMENT).

5. PERSONAL EXPERIENCE

- DESCRIBE HOBBIES OR OTHER ACTIVITIES THAT SHOW MECHANICAL ABILITY OR PHYSICAL STRENGTH AND THAT MAY BE RELATED TO THE TRADE (FOR EXAMPLE, DOING MINOR REPAIRS AROUND THE HOUSE, USING HAND TOOLS, SERVICING YOUR CAR, AND PLANNING THE FAMILY BUDGET).

THE FOLLOWING ARE SAMPLE QUESTIONS THAT MAY BE ASKED DURING THE INTERVIEW. YOU SHOULD ANSWER ALL QUESTIONS AS COMPLETELY AS POSSIBLE. IT IS YOUR RESPONSIBILITY TO TELL THE COMMITTEE ABOUT ALL OF YOUR TRADE-RELATED INTERESTS, ACTIVITIES, AWARDS, AND EXPERIENCES.

1. WHY DO YOU WANT TO BE A?
2. WHY DID YOU CHOOSE OVER SOME OTHER TRADE?
3. HAVE YOU EVER SEEN SOMEONE DO THIS KIND OF WORK?
4. CONSTRUCTION SITES ARE COLD IN WINTER, HOT IN SUMMER; THEY CAN BE MUDDY AND WET. WHAT MAKES YOU CONSIDER WORKING IN THESE CONDITIONS?
5. WHAT KINDS OF WORK HAVE YOU DONE IN THE PAST?
6. THE LANGUAGE ON A CONSTRUCTION SITE GETS PRETTY ROUGH SOMETIMES. DO YOU THINK YOU CAN TAKE IT?
7. CAN YOU TRAVEL? (ASKED ONLY IF TRAVELING IS REQUIRED.)
8. DO YOU HAVE TRANSPORTATION?
9. (IF THE APPLICANT HAS ANY COLLEGE.) I SEE YOU WENT THROUGH YEARS OF COLLEGE. WHY AREN'T YOU WORKING IN THE FIELD FOR WHICH YOU TRAINED?
10. HOW DO YOU FEEL ABOUT GOING TO SCHOOL AS PART OF YOUR APPRENTICESHIP?
11. IS THERE ANYTHING ELSE THAT YOU WOULD LIKE TO TELL US ABOUT YOURSELF?

A GENERAL QUESTION SUCH AS QUESTION 11 PROVIDES YOU WITH THE OPPORTUNITY TO DESCRIBE ANYTHING THAT WAS NOT COVERED BY PREVIOUS QUESTIONS AND THAT YOU THINK IS IMPORTANT.

FOR A LIST OF THE MAJOR APPRENTICEABLE OCCUPATIONS IN MINNESOTA.
TYPE: APP OCCS

FOR A LIST OF APPRENTICESHIP OFFICES NEAR YOU,
TYPE: APP OFC

There are certain basic skills that are thought to be necessary to live in and contribute to our society. These include reading, writing, and speaking skills which are needed to perform day-to-day tasks and which also form the basis of later learning. Most communities offer instructional programs for adults 16 and older who want to improve their basic skills. In many states, this instruction is provided through the Adult Basic Education Program (ABE).

ABE programs are usually organized through community colleges or local school district offices. Most include instruction in reading, writing, and arithmetic, and preparation for occupational training. Some ABE students study to complete General Educational Development (GED) requirements. The GED is generally accepted in place of a high school diploma. Some work to receive an adult high school diploma. Others work to learn 'survival' skills or English speaking skills.

---PROGRAM ADMISSION: ABE programs are open to all adults 16 and older who want to improve their basic skills.

---TYPICAL COURSE WORK: Course work varies depending on each student's goals. Independent, one-on-one, and small group study methods are used. Course work usually includes some or all of the following:

Reading

Arithmetic

Writing

Job Seeking Skills

Non-English speaking students also learn spoken English and language structure.

---GRADUATION REQUIREMENTS: Vary depending on the goals of each student. Many ABE students continue until they pass the tests required to receive their GED or adult high school diploma.

CIPS: 32.01

FOR FURTHER INFORMATION, CONTACT THE ADULT EDUCATION PROGRAM ADMINISTRATOR AT CLOSEST ABE PROGRAM OF THOSE LISTED BELOW:

- - - - - 25001 ALBERT LEA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ADULT BASIC EDUCATION' PROGRAM PROVIDES ADULT STUDENTS WITH BASIC EDUCATIONAL SKILLS. THE G.E.D. PROGRAM PROVIDES NON-HIGH SCHOOL GRADUATES WITH THE EQUIVALENCY OF A HIGH SCHOOL DIPLOMA.

--- DEGREES OFFERED: A G.E.D. IS OFFERED.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE SELF PACED FOR THE INDIVIDUAL.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'G.E.D.' PROGRAM PROVIDES NON-HIGH SCHOOL GRADUATES WITH THE EQUIVALENCY OF A HIGH SCHOOL DIPLOMA.

--- DEGREES OFFERED: A G.E.D. IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS SELF PACED.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: SPECIAL PROGRAMS ARE AVAILABLE IN BASIC MATH

AND READING SKILLS FOR THOSE WHO NEED TO IMPROVE THEIR SKILLS IN THESE AREAS.

--- DEGREES OFFERED: NO DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS SELF PACED TO MEET THE INDIVIDUAL'S NEEDS.

- - - - - 25004 AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'G.E.D.' PROGRAM PROVIDES STUDENTS WITH THE EQUIVALENT OF A HIGH SCHOOL DIPLOMA. THE 'SPECIAL NEEDS' PROGRAM PROVIDES STUDENTS WITH BASIC SKILLS IN READING AND MATH. THE 'READING' PROGRAM PROVIDES STUDENTS WITH BASIC READING SKILLS.

--- DEGREES OFFERED: A G.E.D., AS WELL AS CERTIFICATES IN SPECIAL NEEDS AND READING PROGRAMS, ARE OFFERED.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE SELF PACED TO MEET THE INDIVIDUAL'S NEEDS.

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: A SPECIAL 'HIGH SCHOOL EQUIVALENCY' PROGRAM IS OFFERED.

--- DEGREES OFFERED: UPON SUCCESSFUL COMPLETION OF THE PROGRAM, A G.E.D. IS AWARDED.

--- LENGTH OF PROGRAM: THE HIGH SCHOOL EQUIVALENCY PROGRAM IS SELF PACED.

- - - - - 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: 'ADULT BASIC EDUCATION' IS OFFERED TO ANYONE SIXTEEN YEARS OF AGE OR OLDER TO IMPROVE THEIR READING, MATH, AND LANGUAGE SKILLS. THE PURPOSE OF THIS COURSE IS TO HELP STUDENTS BRING THEIR BASIC EDUCATIONAL SKILLS UP TO AN EIGHTH GRADE LEVEL. THE MATERIAL PRESENTED IN THIS PROGRAM COULD BE HELPFUL TO STUDENTS WHO WISH TO GAIN THEIR G.E.D.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED.

--- LENGTH OF PROGRAM: CLASSES ARE HELD FOUR NIGHTS A WEEK ON A DROP IN BASIS.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25012 FARIBAULT AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ADULT BASIC EDUCATION SERIES' IS AVAILABLE TO THOSE WHO WANT TO IMPROVE THEIR SKILLS IN READING, MATH, AND RELATED AREAS. THE ADULT VOCATIONAL PART-TIME AND EXTENSION CLASSES ARE HELD IN THE EVENING.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED.

--- LENGTH OF PROGRAM: THE LENGTH OF THIS PROGRAM VARIES.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25019 MOORHEAD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE INSTITUTE OFFERS 'BASIC EDUCATION' FOR ADULTS SEEKING IMPROVEMENT OF BASIC ENGLISH SKILLS AS WELL AS PERSONS LEARNING THE ENGLISH LANGUAGE. BASIC MATH SKILLS ARE ALSO COVERED.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED.

--- LENGTH OF PROGRAM: CLASSES ARE HELD DURING THE AFTERNOON AND EVENING. THE LENGTH OF THE PROGRAMS VARIES WITH THE STUDENT'S NEEDS.

- - - - - 25021 PIPESTONE AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ADULT BASIC EDUCATION' PROGRAM IS A FEDERALLY SUPPORTED PROGRAM DESIGNED TO AID THOSE WHO HAVE NOT ATTAINED AN

EIGHTH GRADE LEVEL IN READING, WRITING, SPELLING, OR MATH. THERE IS ALSO A SPECIAL PROGRAM FOR THOSE WHO HAVE ENGLISH AS THEIR SECOND LANGUAGE.

--- DEGREES OFFERED: STUDENTS HAVE BEEN ABLE TO PROGRESS TO THE G.E.D. PROGRAM AND EVENTUALLY ATTAIN THEIR HIGH SCHOOL EQUIVALENCY DIPLOMA.

--- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAM VARIES WITH THE NEEDS OF THE INDIVIDUALS INVOLVED.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'G.E.D.' PROGRAM IS DESIGNED FOR PEOPLE WHO HAVE NOT COMPLETED HIGH SCHOOL AND WISH TO BRING THEIR EDUCATION UP TO THAT LEVEL.

--- DEGREES OFFERED: A G.E.D. IS OFFERED.

--- LENGTH OF PROGRAM: LENGTH OF TRAINING VARIES WITH THE BACKGROUND AND NEEDS OF THE STUDENT.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: ADULT STUDENTS MAY TAKE COURSES TO PREPARE FOR OBTAINING A G.E.D. STUDENTS ALSO MAY PURSUE CERTIFICATES IN 'READING', 'MATH', AND 'SPELLING SKILLS' PROGRAMS.

--- DEGREES OFFERED: A G.E.D., AS WELL AS CERTIFICATES IN READING, MATH, AND SPELLING, ARE OFFERED.

--- LENGTH OF PROGRAM: THESE PROGRAMS ARE SELF PACED.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25028 THIEF RIVER FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'G.E.D.' PROGRAM PROVIDES BASIC SKILLS AND EDUCATION TO HELP PEOPLE FUNCTION ADEQUATELY IN SOCIETY, ACCOMPLISH PERSONAL OBJECTIVES, AND OBTAIN HIGH SCHOOL EQUIVALENCY DIPLOMAS.

--- DEGREES OFFERED: A G.E.D. IS OFFERED.

--- LENGTH OF PROGRAM: THE LENGTH VARIES DEPENDING ON THE STUDENT'S BACKGROUND AND NEEDS.

- - - - - 25029 WADENA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ADULT BASIC EDUCATION' PROGRAM BRINGS PERSONS WITH LESS THAN AN EIGHTH GRADE EDUCATION UP TO THE EIGHTH GRADE LEVEL. THE 'G.E.D.' PROGRAM BRINGS PERSONS WITH MORE THAN AN EIGHTH GRADE EDUCATION, BUT WITHOUT A HIGH SCHOOL DIPLOMA, UP TO THE LEVEL OF HIGH SCHOOL GRADUATES.

--- DEGREES OFFERED: A G.E.D. IS OFFERED.

--- LENGTH OF PROGRAM: THE LENGTH OF THESE PROGRAMS VARIES WITH THE STUDENT'S BACKGROUND.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'EVENING SCHOOL' PROGRAM PROVIDES AN AVENUE FOR PEOPLE, WHO HAVE NOT FINISHED HIGH SCHOOL, TO CONTINUE THEIR EDUCATION AND OBTAIN A HIGH SCHOOL DIPLOMA.

--- DEGREES OFFERED: STUDENTS WHO PASS THE REQUIRED EXAM MAY RECEIVE A G.E.D.

--- LENGTH OF PROGRAM: LENGTH OF STUDIES VARIES WITH THE STUDENT'S BACKGROUND AND NEEDS.

- - - - - 25031 WINONA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ADULT BASIC EDUCATION' PRO-GRAM

PREPARES INDIVIDUALS TO TAKE THE G.E.D. EXAM.

--- DEGREES OFFERED: STUDENTS MAY TAKE THE G.E.D. EXAM AND ATTAIN THEIR HIGH SCHOOL EQUIVALENCY CERTIFICATE.

--- LENGTH OF PROGRAM: THIS IS A SELF PACED PROGRAM.

--- SPECIAL COSTS: PROGRAM RELATED COSTS WILL INCLUDE ABOUT \$12 FOR BOOKS AND SUPPLIES.

- - - - - 25032 EAST GRAND FORKS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'G.E.D.' PROGRAM PROVIDES REFRESHER INSTRUCTION IN LANGUAGE, ARTS, MATH, AND READING SKILLS. THIS PROGRAM IS PROVIDED THROUGH COMMUNITY EDUCATION CLASSES.

--- DEGREES OFFERED: A G.E.D. DIPLOMA IS OFFERED.

--- LENGTH OF PROGRAM: THERE IS NO SPECIFIC LENGTH OF TIME FOR THE G.E.D. PROGRAM.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25033 RED WING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'GENERAL EDUCATION DEVELOPMENT' (G.E.D.) PROGRAM PREPARES STUDENTS FOR THE G.E.D. EXAM.

--- DEGREES OFFERED: A G.E.D. IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS SELF PACED.

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: A G.E.D. PROGRAM IS OFFERED FOR THOSE WHO HAVE ATTAINED AT LEAST AN EIGHTH GRADE EDUCATION BUT LESS THAN A HIGH SCHOOL EDUCATION.

--- DEGREES OFFERED: STUDENTS WHO COMPLETE THE PROGRAM ARE ELIGIBLE TO TAKE THE EXAM TO EARN A G.E.D.

--- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAM DEPENDS UPON THE NEEDS OF THE INDIVIDUAL STUDENT.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: INVER HILLS PROVIDES A 'LEARNING LABORATORY' WHICH PROVIDES INDIVIDUALIZED EDUCATION AT ANY LEVEL. IT ALSO PROVIDES FACILITIES FOR A COOPERATIVE G.E.D. TRAINING AND TESTING PROGRAM OFFERED THROUGH THE ST. PAUL SCHOOL SYSTEM.

--- DEGREES OFFERED: STUDENTS PARTICIPATING IN THE G.E.D. PROGRAM MAY EARN THEIR DIPLOMA BY TAKING AND PASSING THE TEST.

--- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAM VARIES WITH THE INDIVIDUAL.

Colleges and universities offer alternative education programs such as correspondence study, credit by examination, and credit for prior learning to meet the needs of special student groups. These special groups include those who are home bound or who cannot commute to a school which meets their educational needs, those who choose to study independently, and those who wish to substitute related work or life experiences to meet certain college requirements. Many schools also offer continuing education opportunities for students who work full-time.

Alternative education programs vary from school to school. A general description of three different types of programs follows:

CONTINUING EDUCATION OPPORTUNITIES

Many public and private colleges and universities offer undergraduate and graduate courses in communities throughout the state as part of a continuing education program. Courses are usually offered at night at the school or at a local area school or college. Courses offered vary from term to term and community to community. Course fees generally follow a school's part-time fee policy. This allows a continuing education student to pay a fee per credit hour taken. Students may take up to six credit hours per term.

Students who take continuing education courses and ultimately plan to apply their work toward a degree at a college, should check the college's degree requirements and transfer policies. For more information on continuing education, contact the college or university nearest you.

CORRESPONDENCE STUDY

Correspondence study for the University of Minnesota is coordinated by the Department of Independent Study. More than 300 college courses and more than 40 high school courses are offered. Some graduate credits are offered through television courses. College courses cost \$34 per degree credit. High school courses cost \$28 for quarter unit and \$56 for half unit. Television courses cost between \$104 - \$139. Text books and supplies are additional.

For more information or a catalog listing course descriptions, contact:

Department of Independent Study
University of Minnesota
45 Westbrook Hall
77 Pleasant Street S.E.
Minneapolis, Minnesota 55455
Phone: (612) 373-3256

Other schools may offer correspondence courses. For information contact the Independent Study Office at the school.

ALTERNATIVE CREDIT PROGRAMS

The following alternative credit programs are designed to give people

college credit for activities or classes taken outside the normal college routine. Some programs are based on classes that substitute for college work. Other programs allow students to meet college requirements by taking tests or by substituting related work or life experiences. Credit earned through alternative credit programs can apply toward a college degree. These programs can cut down on the time and cost of getting a college education.

Colleges vary in their participation in the following programs. Look at item 69 in the MCIS school file for any school you are interested in. Item 69 gives information on which alternative credit programs are available at the school.

ADVANCED PLACEMENT (AP) PROGRAM

The AP program is administered by the College Entrance Examination Board. It sponsors teaching of a number of college level courses in high schools. High school students may take AP approved classes, along with other course work, in their senior year. An AP exam is given at the end of the class. Students who pass the exam may be eligible for college credit for the course work, which applies to their college transcript of work completed. Some students take one or two basic college courses under the AP Program during high school. Those who take a greater number of AP classes can skip the major course work of the first year of college.

COLLEGE LEVEL EXAMINATION PROGRAM (CLEP)

The CLEP Program allows people to take standardized tests which, if passed, provide some amount of college level credit which applies to their college transcript of work completed. People may prepare to take a CLEP exam in a subject area by studying on their own time, taking a brush-up class, or just relying on past knowledge and experience. A number of CLEP tests are available. Colleges vary in their participation and in the amount of college credit they give for passing a particular CLEP test.

CHALLENGE FOR COURSE CREDIT

Many colleges have their own program that allows a student to challenge a course. If a person feels that they already have the knowledge or experience being taught in a class, they may be able to take a test that covers the class's content. If the test is passed, the student may either get credit or have the requirement of taking that class waived. Colleges vary in the way they handle Challenge for Course Credit.

CREDIT FOR PRIOR LEARNING (CPL)

People with various kinds of prior learning, such as knowledge and skills that have been acquired in a variety of ways, may find that many of these are equivalent or similar to knowledge and competence being developed in college. Jobs, military service, volunteer work, and self directed learning all provide related experience. Credit for Prior Learning programs translate these experiences into academic credit. Colleges vary in their participation and in the amount of credit they give for prior learning.

CIPS: none

SCHOOLS:

- - - - - 25002 ALEXANDRIA AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: ADULT PROGRAMS OFFERED ARE 'VETERANS FARM MANAGEMENT', 'FARM BUSINESS MANAGEMENT I', AND 'FARM BUSINESS MANAGEMENT II'.
--- DEGREES OFFERED: DIPLOMAS ARE OFFERED IN VETERANS FARM MANAGEMENT, FARM MANAGEMENT I, AND FARM MANAGEMENT II.
--- LENGTH OF PROGRAM: THESE PROGRAMS VARY IN LENGTH.
--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25003 ANOKA AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: EVENING 'ADULT EDUCATION' CLASSES ARE OFFERED IN A NUMBER OF PROGRAMS.
--- DEGREES OFFERED: A CERTIFICATE IS OFFERED.
--- LENGTH OF PROGRAM: THE PROGRAMS VARY IN LENGTH.

- - - - - 25004 AUSTIN AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: A NUMBER OF 'CONTINUING EDUCATION' TRAINING PROGRAMS ARE OFFERED. THEY MEET THE NEEDS OF INDIVIDUAL ADULT STUDENTS WHO ARE SEEKING TO FURTHER THEIR EDUCATION.
--- DEGREES OFFERED: DIPLOMAS AND CERTIFICATES ARE OFFERED IN A NUMBER OF PROGRAMS OF STUDY.
--- LENGTH OF PROGRAM: THE PROGRAMS VARY IN LENGTH.

- - - - - 25005 BEMIDJI AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: 'ADULT EDUCATION' IS OFFERED IN MANY PROGRAMS OF STUDY.
--- DEGREES OFFERED: CERTIFICATES OF COMPLETION AND ATTENDANCE CERTIFICATES ARE OFFERED IN MANY PROGRAMS OF STUDY.
--- LENGTH OF PROGRAM: THE PROGRAMS OF STUDY VARY IN LENGTH.

- - - - - 25006 BRAINERD AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: A VARIETY OF 'ADULT' PROGRAMS OF STUDY ARE OFFERED. THEY MEET THE STUDENT'S CAREER OR RECREATIONAL NEEDS.
--- DEGREES OFFERED: DIPLOMAS OF COMPLETION AND CERTIFICATES OF ATTENDANCE ARE OFFERED IN A NUMBER OF PROGRAMS OF STUDY.
--- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAMS VARIES.

- - - - - 25007 CANBY AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: 'CONTINUING EDUCATION FOR ADULT STUDENTS' IS OFFERED IN A NUMBER OF PROGRAMS OF STUDY.
--- DEGREES OFFERED: DIPLOMAS AND CERTIFICATES ARE OFFERED.
--- LENGTH OF PROGRAM: THE PROGRAMS OF STUDY VARY IN LENGTH.

- - - - - 25009 DETROIT LAKES AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THREE CONTINUING EDUCATION PRO-GRAMS ARE OFFERED. THEY INCLUDE: 'FARM MANAGEMENT', 'VETERAN'S FARM MANAGEMENT', AND 'SPECIALTY CROPS'. THESE PROGRAMS TRAIN ADULTS WHO ARE ALREADY ENGAGED IN FARMING OCCUPATIONS, BUT WHO WISH TO IMPROVE THEIR MANAGEMENT AND FARMING SKILLS.
--- DEGREES OFFERED: NO DEGREES ARE OFFERED.
--- LENGTH OF PROGRAM: ADULT EDUCATION COURSES HAVE NO SPECIFIED LENGTH.
--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25011 EVELETH AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE EVENING SCHOOL OFFERS ADULT INSTRUCTION CLASSES. FOR MORE INFORMATION, CONTACT THE SCHOOL.
--- DEGREES OFFERED: NO DEGREES ARE OFFERED.
--- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAM WOULD DEPEND ON SUBJECT CHOSEN.

- - - - - 25012 FARIBAULT AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'SMALL BUSINESS MANAGEMENT (ADULT COOPERATIVE)' PROGRAM IS DESIGNED SOLELY TO OFFER EDUCATIONAL ASSISTANCE TO SMALL BUSINESS PERSONS. THEY WILL BE TRAINED TO IMPROVE THE EFFECTIVENESS, EFFICIENCY, AND ORGANIZATION OF THE SMALL BUSINESS. RECORD KEEPING AND ANALYSIS ARE STRESSED.
--- DEGREES OFFERED: A DEGREE OF OCCUPATIONAL PROFICIENCY IS OFFERED.
--- LENGTH OF PROGRAM: THE SMALL BUSINESS MANAGEMENT (ADULT COOPERATIVE) PROGRAM IS A 1 YEAR PROGRAM, WITH STUDENTS MEETING 1 EVENING A MONTH PLUS INSTRUCTION AT THEIR PLACE OF BUSINESS.
--- SPECIAL COSTS: COSTS VARY WITH AN INDIVIDUAL'S PROGRAMS.

- - - - - 25013 GRANITE FALLS AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THE 'ADULT EVENING EDUCATION' PROGRAM OFFERS A WIDE VARIETY OF COURSES THROUGHOUT THE SCHOOL YEAR. SOME COURSES ARE RECREATIONAL IN NATURE AND HELP MAKE LEISURE TIME MORE ENJOYABLE. SOME OF THE COURSES OFFERED ARE GOLF, REFRESHER OFFICE COURSES, BASIC MACHINE SHOP, FLUID POWER, SEWING, WELDING, AUTOMOTIVE TUNE UP, FOREIGN LANGUAGES, SNOWMOBILE MAINTENANCE, TAX ACCOUNTING, FIRST AID, AND FIREFIGHTING SKILLS.
--- DEGREES OFFERED: DEGREES DEPEND ON THE PROGRAM OF STUDY.
--- LENGTH OF PROGRAM: THE LENGTH OF THE COURSE WOULD DEPEND ON THE FIELD CHOSEN.
--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25017 MANKATO AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: 'CONTINUING EDUCATION' CLASSES ASSIST PEOPLE IN PREPARING FOR GAINFUL EMPLOYMENT. THIS INCLUDES SELECTING AND ORGANIZING LEARNING EXPERIENCES WHICH PREPARE THE LEARNER IN TERMS OF HIS OR HER CAPACITY FOR SATISFYING AND EFFECTIVE PARTICIPATION IN FAMILY, JOB, AND COMMUNITY LIFE.
--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS AWARDED.
--- LENGTH OF PROGRAM: THESE PROGRAMS VARY IN LENGTH.

- - - - - 25018 MINNEAPOLIS TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: MORE THAN 300 SPECIALIZED CLASSES ARE AVAILABLE TO PEOPLE THROUGH THE 'ADULT EDUCATION' PROGRAM. ANYONE OVER 16 YEARS OLD IS INVITED TO PARTICIPATE IN THE ADULT PROGRAM CLASSES. CLASSES ARE DESIGNED FOR PEOPLE WHO NEED UP-GRADING OR UPDATING OR WHO WANT TO LEARN NEW SKILLS FOR THEIR JOBS.
--- DEGREES OFFERED: NO DEGREES ARE OFFERED.
--- LENGTH OF PROGRAM: CLASSES MEET ONCE OR TWICE A WEEK FOR TWO OR THREE HOURS. THE NUMBER OF WEEKS A CLASS MEETS VARIES.

- - - - - 25019 MOORHEAD AREA VOCATIONAL TECHNICAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: IN ADDITION TO THE REGULAR DAY CURRICULA, A 'CONTINUING ADULT EDUCATION' PROGRAM IS OFFERED FOR PERSONS WISHING TO UPGRADE SPECIFIC SKILLS OR PURSUE A TOPIC OF GENERAL INTEREST. THIS INCLUDES CLASSES IN BUSINESS, TRADE-TECHNICAL SKILLS, HEALTH, AND HOME

ECONOMICS AS WELL AS CLASSES OF A RECREATIONAL NATURE.

--- DEGREES OFFERED: NO DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: SESSIONS ARE GENERALLY HELD ONE NIGHT A WEEK, FOR FOUR TO TEN WEEKS.

- - - - - 25020 PINE TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ADULT EDUCATION' PROGRAM OFFERS ADULT VOCATIONAL COURSES THAT STRESS RETRAINING AND UPGRADING FOR ADULTS WHO ARE ALREADY IN THE FIELD.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS AWARDED TO THOSE WHO SATISFACTORILY COMPLETE EACH OF THESE COURSES.

--- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAM VARIES.

- - - - - 25021 PIPESTONE AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'CONTINUING EDUCATION' PROGRAM IS DESIGNED FOR ADULTS WISHING TO UPGRADE SPECIFIC SKILLS OR RETRAIN IN A NEW VOCATION.

--- DEGREES OFFERED: A CERTIFICATE IS AWARDED.

--- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAMS VARIES.

- - - - - 25022 916 AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ADULT EXTENSION' PROGRAM OFFERS A FULL PROGRAM OF ADULT VOCATIONAL COURSES THAT STRESS JOB ENTRY, RETRAINING, AND UPGRADING SKILLS AS WELL AS CAREER EXPLORATION OPPORTUNITIES IN ALL AREAS OF EMPLOYMENT. COURSES ARE OFFERED UNDER THE CATEGORIES OF BUSINESS AND OFFICE OCCUPATIONS, FOOD DISTRIBUTIVE EDUCATION, HEALTH, SAFETY, PERSONAL SERVICE, TECHNICAL PROGRAMS, HORTICULTURE, AND CONSUMER EDUCATION.

--- DEGREES OFFERED: A CERTIFICATE OF COMPETENCY IS AWARDED.

--- LENGTH OF PROGRAM: APPROXIMATELY 90 COURSES ARE OFFERED EACH TERM. THESE COURSES VARY IN LENGTH.

- - - - - 25023 ROCHESTER AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ADULT FARM MANAGEMENT' PROGRAM HELPS FARMERS BASE THEIR MANAGEMENT DECISIONS UPON SOUND ECONOMIC PRINCIPLES, BY STUDYING PAST AND CURRENT RECORDS OF INCOME AND EXPENSES, AND INDIVIDUAL CROP AND LIVESTOCK ENTERPRISE ANALYSIS DATA TO ASSIST THE FUTURE OF FARMING OPERATIONS.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED.

--- LENGTH OF PROGRAM: FARM MANAGEMENT OFFERS CONTINUOUS CONSULTATION SERVICES TO FARMERS.

- - - - - 25024 ST. CLOUD AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: 'EVENING SCHOOL' COURSES ARE OFFERED IN THE AREAS OF OFFICE EDUCATION AND DATA PROCESSING, DISTRIBUTIVE EDUCATION, HOMEMAKING, TRADE EXTENSION, AND GENERAL INTEREST COURSES. THE COURSES MEET COMMUNITY AND AREA TRAINING NEEDS.

--- DEGREES OFFERED: SEPARATE CERTIFICATES ARE OFFERED.

--- LENGTH OF PROGRAM: COURSE LENGTHS VARY.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25025 ST. PAUL AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: FOUR KINDS OF PROGRAMS ARE OFFERED. APPRENTICESHIP TRADE EXTENSION CLASSES OFFER RELATED TRAINING FOR APPRENTICES. 'TRADE EXTENSION', 'TECHNICAL EDUCATION', 'BUSINESS EDUCATION'

AND 'TRAINING, HEALTH, AND HOMEMAKING'. CLASSES TRAIN PEOPLE WHO ARE EITHER CURRENTLY EMPLOYED OR WHO ARE TEMPORARILY UNEMPLOYED TO UPGRADE THEIR PRESENT SKILLS OR TO LEARN NEW SKILLS.

--- DEGREES OFFERED: STUDENTS RECEIVE A CERTIFICATE OF COMPLETION OR DIPLOMA

--- LENGTH OF PROGRAM: CLASSES VARY IN LENGTH.

- - - - - 25026 STAPLES AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: A VARIETY OF COURSES ARE AVAILABLE. MOST ARE OFFERED IN THE EVENING.

--- DEGREES OFFERED: THOSE WHO COMPLETE A COURSE ARE GIVEN A CERTIFICATE WHICH SHOWS HOW MANY HOURS OF TRAINING THEY RECEIVED.

--- LENGTH OF PROGRAM: COURSES VARY IN LENGTH.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25027 HENNEPIN TECHNICAL CENTERS

--- OBJECTIVES OF THE PROGRAM: ADULT COURSES ARE OFFERED IN A NUMBER OF AREAS OF STUDY.

--- DEGREES OFFERED: COURSE COMPLETION CERTIFICATES ARE OFFERED.

--- LENGTH OF PROGRAM: THESE COURSES VARY IN LENGTH.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25028 THIEF RIVER FALLS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: A VARIETY OF 'ADULT EDUCATION' AND 'EVENING SCHOOL' PROGRAMS ARE OFFERED. THEY ALLOW PEOPLE TO UPGRADE THEMSELVES IN THEIR PRESENT CAREERS, TO RETRAIN THEMSELVES FOR OTHER CAREERS, TO TAKE COURSES FOR THEIR OWN ENJOYMENT, OR TO MEET OTHER GOALS. THEY ALSO PROVIDE TRAINING FOR WORK IN LOCAL INDUSTRIES.

--- DEGREES OFFERED: CERTIFICATES OF COMPLETION ARE AWARDED.

--- LENGTH OF PROGRAM: COURSES VARY IN LENGTH.

- - - - - 25029 WADENA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: A VARIETY OF 'CONTINUING EDUCATION' COURSES ARE OFFERED. THE COURSES TRAIN NEW EMPLOYEES FOR BUSINESSES OR INDUSTRIES AND TO UPGRADE AND RETRAIN PEOPLE ALREADY WORKING.

--- DEGREES OFFERED: CERTIFICATES OF COMPLETION ARE AWARDED.

--- LENGTH OF PROGRAM: THE COURSES VARY IN LENGTH.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 25030 WILLMAR AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: A 'NIGHT SCHOOL' PROGRAM IS AVAILABLE FOR PEOPLE WHO WISH TO IMPROVE THEIR ACADEMIC OR VOCATIONAL BACKGROUNDS. MANY OF THE REGULAR DAYTIME VOCATIONAL SUBJECT AREAS ARE INCLUDED IN THE PROGRAM. LEISURE TIME, HOBBY, AND RECREATIONAL ACTIVITIES ARE ALSO OFFERED.

--- DEGREES OFFERED: THOSE WHO COMPLETE A COURSE RECEIVE CLOCK HOURS CERTIFICATES DOCUMENTING THE NUMBER OF HOURS THEY HAVE SPENT IN TRAINING.

--- LENGTH OF PROGRAM: COURSE LENGTHS VARY.

- - - - - 25031 WINONA AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'ADULT EDUCATION' PROGRAM OFFERS SEVERAL ADULT VOCATIONAL COURSES THAT STRESS JOB ENTRY, RETRAINING, AND

UPGRADING SKILLS AS WELL AS EXPLORATION OF OPPORTUNITIES IN AREAS OF SPECIAL INTEREST.

--- DEGREES OFFERED: A CERTIFICATE OF ATTENDANCE IS AWARDED TO THOSE WHO COMPLETE THESE COURSES.

--- LENGTH OF PROGRAM: THESE PROGRAMS VARY IN LENGTH.

- - - - - 25032 EAST GRAND FORKS AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: THE 'EMERGENCY MEDICAL TECHNICIAN' PROGRAM IS OFFERED THROUGH ADULT EDUCATION. STUDENTS WHO COMPLETE THE PROGRAM ARE QUALIFIED TO TAKE THE WRITTEN AND PRACTICAL NATIONAL REGISTRY EXAMINATION GIVEN BY THE STATE DEPARTMENT OF HEALTH. ADULT EDUCATION IS ALSO OFFERED IN THE 'VETERAN'S FARM MANAGEMENT' PROGRAM FOR THOSE ENGAGED IN FARMING WHO WISH TO IMPROVE NEEDED SKILLS.

--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS OFFERED.

--- LENGTH OF PROGRAM: THIS PROGRAM IS 81 HOURS LONG.

--- SPECIAL COSTS: COSTS WILL INCLUDE \$25 FOR BOOKS AND SUPPLIES.

- - - - - 25033 RED WING AREA VOCATIONAL TECHNICAL INSTITUTE

--- OBJECTIVES OF THE PROGRAM: 'ADULT EDUCATION' IS AVAILABLE TO ANYONE. COURSES ARE DESIGNED FOR OCCUPATIONAL ADVANCEMENT, IN-SERVICE TRAINING, LIFE ENRICHMENT, AND GENERAL EDUCATION.

--- DEGREES OFFERED: STUDENTS WHO COMPLETE A SEQUENCE OF COURSES MAY RECEIVE A CERTIFICATE OF ATTENDANCE.

--- LENGTH OF PROGRAM: PROGRAMS VARY IN LENGTH DEPENDING ON COMPETENCIES REQUIRED.

- - - - - 26070 BEMIDJI STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: 'CONTINUING EDUCATION' CLASSES ARE NOT A PART OF THE REGULAR COLLEGE CURRICULUM AND ARE NOT LISTED IN THE COLLEGE CATALOG. RATHER, THEY ARE DESIGNED TO MEET THE EDUCATIONAL NEEDS OF PARTICULAR GROUPS AND MAY BE OFFERED FOR CREDIT OR NON-CREDIT DEPENDING UPON THE NEEDS OF THE PARTICULAR GROUP. MOST DEPARTMENTS HAVE A SPECIAL COURSE CALLED 'INDEPENDENT STUDY' WHICH PROVIDES OPPORTUNITIES FOR STUDENTS TO PURSUE TOPICS OF PERSONAL INTEREST WHICH ARE RELATED TO THAT DEPARTMENT. THE INDEPENDENT STUDY COURSES ARE FOR REGULAR REGISTERED STUDENTS. THE 'EXTERNAL STUDIES' PROGRAM IS FOR ADULTS WHO CANNOT PARTICIPATE IN AN ON-CAMPUS PROGRAM.

--- DEGREES OFFERED: CONTINUING EDUCATION IS NOT A DEGREE PROGRAM, BUT CREDITS EARNED ARE APPLICABLE AS ELECTIVES IN A DEGREE PROGRAM. INDEPENDENT STUDY MAY BE APPLIED TOWARD A DEGREE IN THE MAJOR CHOSEN.

- - - - - 26071 MANKATO STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'EXTENDED CAMPUS' PROGRAM BRINGS CLASSES AND OTHER EDUCATIONAL SERVICES TO LOCATIONS OTHER THAN THE HOME CAMPUS. COURSES ARE OFFERED IN A WIDE VARIETY OF SUBJECTS. THE STUDENT IS OFFERED COURSES IN 'INDEPENDENT STUDY' AS A SUPPLEMENT TO A SPECIFIC PROGRAM.

--- DEGREES OFFERED: COLLEGE CREDIT AT BOTH THE UNDERGRADUATE AND GRADUATE LEVEL IN A WIDE VARIETY OF SUBJECTS IS OFFERED THROUGH EXTENDED CAMPUS. THESE CREDITS MAY BE APPLIED TOWARD VARIOUS DEGREE PROGRAMS. NO DEGREE IS OFFERED IN INDEPENDENT STUDY, HOWEVER, A STUDENT MAY TAKE COURSES IN INDEPENDENT STUDY WHILE PREPARING IN A SPECIFIC DEGREE PROGRAM AT EITHER THE UNDERGRADUATE OR GRADUATE LEVEL.

- - - - - 26072 MOORHEAD STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'EXTERNAL STUDIES' PROGRAM PROVIDES

ADULT STUDENTS WITH THE OPPORTUNITY TO COMPLETE THEIR DEGREE IN A CHOSEN FIELD. GENERAL EDUCATION REQUIREMENTS MUST BE COMPLETED AS WELL AS AN AREA OF STUDY AND A SPECIALIZATION REQUIREMENT. THE EXTERNAL STUDIES PROGRAM OFFERS INDEPENDENT STUDY TO THOSE ADULT STUDENTS WHOSE COMMITMENTS PRECLUDE REGULAR ATTENDANCE ON COLLEGE CAMPUS. CREDITS WILL BE GRANTED FOR VALIDATED COMPETENCIES DEVELOPED THROUGH WORK EXPERIENCE OR COMMUNITY SERVICE AND STUDENTS WILL BE ASSISTED IN OBTAINING DEGREES IN AN AREA OF INTEREST. TO COMPLETE THE PROGRAM, STUDENTS MAY TAKE REGULAR COURSES, INDEPENDENT STUDY, INTERNSHIPS, OR SPECIAL EXAMINATIONS, OR MAY APPLY TRANSFER CREDIT OR EVALUATION OF NON-COLLEGIATE OR NON-INSTITUTIONAL STUDY OR EXPERIENCE.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED, HOWEVER, CREDITS EARNED MAY APPLY TO A DEGREE IN A CHOSEN MAJOR.

- - - - - 26073 ST. CLOUD STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: 'EXTENSION' COURSES ARE NORMALLY HELD AT OFF-CAMPUS SITES. THE COURSES OFFERED INCLUDE BOTH REGULAR COURSES, WORKSHOPS, AND SHORT COURSES AT BOTH THE UNDERGRADUATE AND GRADUATE LEVELS. NON-CREDIT PROGRAMS ARE OCCASIONALLY OFFERED AT OFF-CAMPUS SITES. INDEPENDENT STUDY PACKAGE COURSES ARE AVAILABLE FOR ON-CAMPUS AND OFF-CAMPUS STUDENTS.

--- DEGREES OFFERED: AN ASSOCIATE OF ARTS DEGREE MAY BE COMPLETED THROUGH EXTENSION COURSES IN A LIMITED NUMBER OF OFF-CAMPUS CENTERS, BUT NORMALLY DEGREES ARE NOT ATTAINABLE SOLELY THROUGH EXTENSION COURSES. EXTENSION COURSES MAY, HOWEVER, BE APPLIED TO DEGREE PROGRAMS.

- - - - - 26074 WINONA STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'CONTINUING EDUCATION' PROGRAM OFFERS COURSES OFF-CAMPUS AS WELL AS ON-CAMPUS. ALL COURSES CARRY REGULAR UNIVERSITY CREDIT AND MAY BE TAKEN FOR EITHER GRADUATE OR UNDERGRADUATE CREDIT. THIS PROGRAM IS DESIGNED TO MEET THE VARIOUS NEEDS OF PEOPLE IN SOUTHEASTERN MINNESOTA. ALL DEPARTMENTS OFFER COURSES IN 'PROBLEMS' IN THE FIELD. THESE COURSES ARE DESIGNED AS INDEPENDENT STUDY IN THE SOLUTION OF A PROBLEM, OR AS GUIDED RESEARCH INTO THE SUBJECTS OF SPECIAL INTEREST TO THE STUDENTS. THE 'EXTERNAL STUDIES' PROGRAM OFFERS NONTEACHING DEGREES TO STUDENTS OVER 25 YEARS OF AGE. EACH STUDENT HAS A PERSONAL ADVISOR. CREDIT IS GRANTED FOR LIFE EXPERIENCES. THIS PROGRAM IS DESIGNED TO SERVE ADULTS.

--- DEGREES OFFERED: THE CONTINUING EDUCATION PROGRAM DOES NOT OFFER A DEGREE. COURSES TAKEN THROUGH THIS PROGRAM MAY BE USED TO SATISFY REQUIREMENTS FOR DEGREE PROGRAMS THROUGH OTHER DEPARTMENTS. COURSES TAKEN THROUGH INDEPENDENT STUDY MAY BE USED TO SATISFY DEGREE REQUIREMENTS. STUDENTS IN THE E.S.P. PROGRAM MAY EARN THE BACHELOR OF ARTS AND BACHELOR OF SCIENCE (NON-TEACHING) DEGREES IN ALL ACADEMIC AREAS.

- - - - - 26175 SOUTHWEST STATE UNIVERSITY

--- OBJECTIVES OF THE PROGRAM: THE 'CONTINUING EDUCATION' PROGRAM PROVIDES OFF-CAMPUS COURSES, CREDIT PROGRAMS, AND NON-CREDIT PROGRAMS TO ADULT STUDENTS. THE STUDENT IS OFFERED COURSES IN 'INDEPENDENT STUDY' AS A SUPPLEMENT TO A SPECIFIC PROGRAM.

--- DEGREES OFFERED: NO DEGREE IS OFFERED IN CONTINUING EDUCATION OR INDEPENDENT STUDY, HOWEVER, A STUDENT MAY APPLY CREDIT EARNED IN A CONTINUING EDUCATION PROGRAM OR INDEPENDENT STUDY TOWARD A DEGREE IN A SPECIFIC DEGREE PROGRAM.

- - - - - 27139 AUSTIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE OFFICE OF COMMUNITY SERVICES OFFERS 'CONTINUING EDUCATION' TO COMMUNITY RESIDENTS THROUGH EVENING COLLEGE CREDIT COURSES. IT ALSO COOPERATES WITH AUSTIN AVTI AND AUSTIN PUBLIC SCHOOLS TO OFFER NON-CREDIT COURSES AND ACTIVITIES. MANKATO STATE UNIVERSITY OFFERS COLLEGE CREDIT COURSES THROUGH A RESIDENCE CENTER ON THE CAMPUS.

--- DEGREES OFFERED: STUDENTS MAY EARN AN ASSOCIATE IN ARTS OR ASSOCIATE IN SCIENCE DEGREE. THEY MAY ALSO COMPLETE A BACCALAUREATE LEVEL PROGRAM THROUGH MANKATO'S RESIDENCE CENTER.

--- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAMS VARIES.

- - - - - 27140 BRAINERD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: 'COMMUNITY SERVICES' MEET THE EDUCATIONAL, RECREATIONAL, AND CULTURAL NEEDS OF THE COMMUNITY IN NON-TRADITIONAL WAYS. THE COLLEGE PROVIDES SUCH PROGRAMS AS EVENING CREDIT AND NON-CREDIT CLASSES, WORKSHOPS, OFF-CAMPUS CLASSES, TRAINING AND MANAGEMENT PROGRAMS, AND COUNSELING SERVICES. SOME ACADEMIC DIVISIONS ALLOW STUDENTS TO REGISTER FOR APPROVED 'INDEPENDENT STUDY' PROJECTS WHICH ALLOW STUDENTS TO EXPLORE AREAS NOT COVERED BY REGULARLY SCHEDULED COURSES.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED IN COMMUNITY EDUCATION. CREDITS EARNED IN INDEPENDENT STUDY MAY BE APPLIED TO A DEGREE PROGRAM.

--- LENGTH OF PROGRAM: THE COMMUNITY SERVICES PROGRAMS VARY IN LENGTH. THE INDEPENDENT STUDY PROJECTS USUALLY LAST ONE QUARTER.

- - - - - 27142 FERGUS FALLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'INDEPENDENT STUDY' PROGRAM PERMITS STUDENTS TO DEVELOP OR EXPAND ON AN AREA OF SPECIAL INTEREST THROUGH INDEPENDENT STUDY. STUDENTS WORK OUT THEIR INDEPENDENT STUDY PROJECT WITH A FACULTY MEMBER AND OBTAIN THE APPROVAL OF THE DEAN OF INSTRUCTION.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED, BUT CREDITS MAY APPLY TO A DEGREE PROGRAM.

--- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAM WOULD DEPEND ON THE COURSE CHOSEN.

- - - - - 27144 ITASCA COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'CONTINUING EDUCATION' PROGRAM INCLUDES EVENING COURSES FOR CREDIT AND PERSONAL ENRICHMENT. SPECIAL WORKSHOPS AND SEMINARS ARE OFFERED COOPERATIVELY WITH AREA AGENCIES. MANY COURSES ARE BASED ON COMMUNITY INPUT AND INTEREST AND VARY FROM QUARTER TO QUARTER.

--- DEGREES OFFERED: NO DEGREE IS OFFERED.

--- LENGTH OF PROGRAM: STUDENTS MAY TAKE CONTINUING EDUCATION COURSES AS OFTEN AS THEY LIKE.

- - - - - 27145 WILLMAR COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'COMMUNITY SERVICES' PROGRAM EXTENDS EDUCATIONAL OPPORTUNITIES BEYOND TRADITIONAL OFFERINGS. THE PROGRAM CONDUCTS SEMINARS, WORKSHOPS, AND NON-CREDIT CLASSES WHICH SERVE THE NEEDS OF THE AREA. CONTINUING EDUCATION UNITS MAY BE AWARDED TO PERSONS

COMPLETING COMMUNITY SERVICE ACTIVITIES. THE COLLEGE ALSO OFFERS EVENING CLASSES AND THE 'INDEPENDENT STUDY' PROGRAM. STUDENTS SELECT COURSES IN AN AREA OF THEIR OWN SPECIAL INTEREST.

--- DEGREES OFFERED: IN THE COMMUNITY SERVICES PROGRAM, A MAXIMUM OF 9 ELECTIVE CREDITS MAY BE EARNED IN INDEPENDENT STUDY TOWARD AN ASSOCIATE DEGREE.

--- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAM WOULD DEPEND ON THE COURSES CHOSEN OR THE INDEPENDENT STUDY PROJECT.

- - - - - 27146 WORTHINGTON COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'CONTINUING EDUCATION' PROGRAM SERVES STUDENTS THROUGH CREDIT AND NON-CREDIT COURSES, SEMINARS, INSTITUTES, WORKSHOPS, AND EXTENSION COURSES ALL OF WHICH MAY BE HELD ON OR OFF CAMPUS. THE COLLEGE COOPERATES WITH OTHER POST-SECONDARY INSTITUTIONS, LOCAL SCHOOL DISTRICTS, FEDERAL AND STATE AGENCIES, AND THE LOCAL YMCA TO PROVIDE A BALANCED AND COORDINATED EDUCATIONAL AND RECREATIONAL EXPERIENCE. STUDENTS WHO DESIRE OR NEED TO EARN COLLEGE CREDIT THROUGH 'INDEPENDENT STUDY' MAY MAKE ARRANGEMENTS WITH INDIVIDUAL INSTRUCTORS.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED FOR CONTINUING EDUCATION. CREDITS EARNED THROUGH INDEPENDENT STUDY MAY BE APPLIED TO A DEGREE PROGRAM.

--- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAM DEPENDS ON THE COURSE OF STUDY CHOSEN.

- - - - - 27147 VERMILION COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'COMMUNITY SERVICES' PROGRAM OFFERS STUDENTS THE OPPORTUNITY FOR CONTINUING EDUCATION. SERIES OF SHORT COURSES, LECTURES, SEMINARS, AND PUBLIC MEETINGS ARE ALSO OFFERED. 'INDIVIDUALIZED STUDIO AND/OR INDEPENDENT STUDY' IN ART AREAS OF SPECIFIC INTEREST ARE OFFERED. INDEPENDENT STUDY IS ALSO OFFERED IN CONSERVATION.

--- DEGREES OFFERED: CONTINUING EDUCATION UNITS (C.E.U.) ARE OFFERED. CREDITS FROM INDEPENDENT STUDY MAY BE APPLIED TO A DEGREE PROGRAM.

--- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAM DEPENDS ON THE COURSES CHOSEN.

--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 27148 ROCHESTER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: 'EVENING CLASSES' OFFER DEGREE CREDIT OPPORTUNITIES TO COMMUNITY RESIDENTS. CREDIT COURSES, WORKSHOPS, AND SEMINARS ARE SCHEDULED TO MEET THE PROGRAM NEEDS OR PERSONAL INTERESTS OF STUDENTS WHO PREFER EVENING SCHEDULING. THE 'PERSONALIZED EDUCATION' PROGRAM IS BOTH A NONTRADITIONAL METHOD OF ACHIEVING THE ASSOCIATE DEGREE AND A PERSONALIZED PATH TO SELF-ENRICHMENT FOR PERSONS WHO DO NOT INTEND TO PURSUE A DEGREE. STUDENTS DESIGN THEIR OWN EDUCATION ACCORDING TO THEIR WANTS AND NEEDS. THE WORK MAY BE DONE BY INDEPENDENT STUDY, THUS ALLOWING STUDENTS TO LEARN BY METHODS BEST SUITED TO THEIR PERSONALITY.

--- DEGREES OFFERED: THE DEGREE WOULD DEPEND ON THE PROGRAM CHOSEN.

--- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAM WOULD DEPEND ON THE MAJOR CHOSEN.

- - - - - 27149 NORTHLAND COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE COLLEGE OFFERS SOCIAL, CULTURAL, AND INTELLECTUAL ACTIVITIES TO MEET THE NEEDS OF INTERESTED PEOPLE IN THE COMMUNITY. SOME OF THESE ACTIVITIES ARE: EXTENSION COURSES, EVENING CREDIT AND NONCREDIT COURSES, WORKSHOPS, SEMINARS, AND CONFERENCES.

--- DEGREES OFFERED: CREDITS EARNED WILL BE APPLIED TO AN ASSOCIATE IN ARTS DEGREE.

--- LENGTH OF PROGRAM: THE PROGRAMS AND ACTIVITIES VARY IN LENGTH.

- - - - - 27150 MESABI COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE PURPOSE OF THE 'COMMUNITY OUTREACH' PROGRAM IS TO OFFER EXPANDED EDUCATIONAL OPPORTUNITIES, BEYOND TRADITIONAL PROGRAM OFFERINGS, TO THE COMMUNITY. MOST OF THE COURSES ARE OFFERED IN THE EVENING. AREA ADULTS ENROLL FOR PERSONAL ENRICHMENT, TO UPGRADE CAREER SKILLS, AND TO EARN COLLEGE DEGREES. STUDENTS WHO WISH TO STUDY SUBJECTS BEYOND THE SCOPE OF TRADITIONAL COURSES MAY DESIGN 'INDEPENDENT STUDY' PROJECTS.

--- DEGREES OFFERED: AN ASSOCIATE DEGREE MAY BE EARNED ON AN 'EVENING ONLY' BASIS. A CERTIFICATE OF ATTENDANCE IS AVAILABLE FOR COMPLETING A SIX COURSE INDUSTRIAL MANAGEMENT SEQUENCE.

--- LENGTH OF PROGRAM: SINCE THIS PROGRAM/SERVICE IS INDIVIDUALIZED, THE LENGTH OF THE PROGRAM IS VARIABLE.

- - - - - 27152 ANOKA-RAMSEY COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: PERSONS WHO ENROLL IN CERTAIN 'COMMUNITY SERVICES' PROGRAMS MAY BE AWARDED CONTINUING EDUCATION UNITS IN THE AREAS OF OCCUPATIONAL IMPROVEMENT, SOCIAL PROBLEMS, OR ENRICHMENT. 'INDEPENDENT STUDY' OFFERS STUDENTS AN OPPORTUNITY TO DO READING AND RESEARCH ON TOPICS WHICH ARE NOT COVERED IN REGULAR COURSES. STUDENTS MAY REGISTER FOR ONE TO TWELVE CREDITS, DEPENDING ON THE KIND OF INDEPENDENT STUDY PROJECT THEY HAVE ARRANGED.

--- DEGREES OFFERED: STUDENTS MAY EARN A CERTIFICATE IN COMMUNITY SERVICES. CREDITS EARNED IN INDEPENDENT STUDY MAY BE APPLIED TO A DEGREE PROGRAM.

--- LENGTH OF PROGRAM: CONTINUING EDUCATION PROGRAMS VARY IN LENGTH. AN INDEPENDENT STUDY PROJECT USUALLY LASTS ONE QUARTER.

- - - - - 27153 NORTH HENNEPIN COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'COMMUNITY SERVICES' PROGRAM OFFERS COMMUNITY MEMBERS AN OPPORTUNITY FOR CONTINUING EDUCATION AS WELL AS SHORT COURSES, LECTURES, SEMINARS, AND CULTURAL EVENTS. THE COLLEGE ALSO ASSISTS GROUPS IN DEVELOPING IN-SERVICE TRAINING PROGRAMS. STUDENTS MAY PURSUE 'INDEPENDENT STUDY' AS AN ALTERNATIVE TO THE TRADITIONAL APPROACHES TO EDUCATION.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED IN COMMUNITY SERVICES. CREDITS EARNED THROUGH INDEPENDENT STUDY MAY BE APPLIED TO AN ASSOCIATE DEGREE PROGRAM.

--- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAM AND PROJECTS VARY.

- - - - - 27154 LAKEWOOD COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'CONTINUING EDUCATION' PROGRAM SEEKS TO MAKE COLLEGE FACILITIES AND STAFF AVAILABLE FOR AVOCATIONAL AND RECREATIONAL PROGRAMS FOR THE COMMUNITY. THE COURSES ARE USUALLY OFFERED IN THE EVENING AND CHANGE CONTINUALLY DEPENDING ON COMMUNITY INTERESTS AND THE AVAILABILITY OF TEACHING STAFF. THE 'COMPETENCY BASED EDUCATION' PROGRAM IS DESIGNED FOR STUDENTS SEEKING AN ALTERNATIVE TO THE TRADITIONAL COLLEGE DEGREE PROGRAM. STUDENTS USE INDEPENDENT STUDY, INTERNSHIPS, JOB IN-SERVICE TRAINING, CLASSROOM INSTRUCTION, AND EXPERIENTIAL LEARNING TO DEMONSTRATE THE EQUIVALENT OF COLLEGE EXPERIENCE. EACH PROGRAM IS INDIVIDUALLY DESIGNED.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED IN CONTINUING EDUCATION. IN THE COMPETENCY BASED EDUCATION PROGRAM, STUDENTS MAY EARN AN ASSOCIATE OF ARTS DEGREE OR AN EQUIVALENCY CERTIFICATE.

--- LENGTH OF PROGRAM: COMMUNITY RESIDENTS MAY TAKE CONTINUING EDUCATION COURSES AS OFTEN AS THEY LIKE. THE ASSOCIATE DEGREE PROGRAM IS COMPARABLE TO 2 YEARS OF COLLEGE WORK.

- - - - - 27155 RAINY RIVER COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'CONTINUING EDUCATION' PROGRAM PROVIDES EDUCATIONAL OPPORTUNITIES THAT WILL ENCOURAGE PEOPLE TO CONTINUE OR RESUME THEIR EDUCATION. STUDENTS MAY ENROLL IN REGULAR DAY CLASSES OR IN WORKSHOPS OR EVENING COURSES. HONORS COURSES ARE AVAILABLE TO STUDENTS INTERESTED IN PURSUING A DISCIPLINE OR SUBJECT AREA BEYOND WHAT IS OFFERED IN REGULAR CATALOG COURSES.

--- DEGREES OFFERED: STUDENTS MAY EARN AN ASSOCIATE IN ARTS DEGREE, AN ASSOCIATE IN APPLIED SCIENCE OR AN ASSOCIATE IN SCIENCE DEGREE IN THE PROGRAM.

--- LENGTH OF PROGRAM: THE LENGTH OF THE PROGRAM VARIES IN CONTINUING EDUCATION. STUDENTS MAY TAKE COURSES OVER A PERIOD OF SEVERAL YEARS.

- - - - - 27156 NORMANDALE COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE COLLEGE OFFERS NONCREDIT 'CONTINUING EDUCATION' COURSES IN RESPONSE TO THE NEEDS OF THE COMMUNITY. THESE COURSES MAY OR MAY NOT FOLLOW THE SAME SCHEDULE AS THE REGULAR CLASSES. STUDENTS MAY SELECT AND DEVELOP AN 'INDEPENDENT STUDY' PROJECT UNDER THE SUPERVISION OF A FACULTY MEMBER. THIS PROJECT SHOULD BE OF SPECIAL INTEREST TO THE STUDENT AND MAY INVOLVE COLLEGE AND COMMUNITY RESOURCES. THE COLLEGE ALSO OFFERS AN 'INDIVIDUALIZED COMPETENCE BASED EDUCATION' PROGRAM WHICH PERMITS STUDENTS TO DEVELOP A PORTFOLIO AND TO EARN CREDIT FOR PRIOR WORK AND LEARNING EXPERIENCE.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED IN EITHER PROGRAM, BUT CREDITS EARNED THROUGH INDEPENDENT STUDY MAY BE APPLIED TO A DEGREE PROGRAM.

--- LENGTH OF PROGRAM: COURSES VARY IN LENGTH AND PEOPLE MAY ENROLL IN COURSES AS OFTEN AS THEY WISH IN CONTINUING EDUCATION. INDEPENDENT STUDY PROJECTS ARE USUALLY ONE QUARTER LONG.

- - - - - 27157 INVER HILLS COMMUNITY COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE COLLEGE OFFERS AN EXTENSIVE 'EVENING' PROGRAM TO PROVIDE FLEXIBILITY FOR COMMUNITY RESIDENTS WHO WOULD LIKE TO ENROLL IN COLLEGE CREDIT COURSES AT INVER HILLS. COMMUNITY SERVICE NONCREDIT COURSES ARE ALSO AVAILABLE PERIODICALLY ON A SIGN UP BASIS. THE 'COMPETENCY BASED EDUCATION' PROGRAM EMPHASIZES INDIVIDUALLY TAILORED, STUDENT DESIGNED LEARNING PLANS. IT IS A NONTRADITIONAL, COMPETENCY-BASED PROGRAM. THE PROGRAM IS DESIGNED FOR STUDENTS WHOSE CHOSEN FIELD OF STUDY OR LIFE CIRCUMSTANCES MAKE TRADITIONAL EDUCATIONAL OPPORTUNITIES SEEM UNSATISFACTORY. IT IS ALSO DIRECTED TOWARD ADULTS WHO HAVE A CLEAR SENSE OF DIRECTION AND WANT A VOICE IN DESIGNING THEIR PROGRAM AND FOR THOSE WHO ALREADY HAVE MANY AREAS OF COMPETENCY AND WANT EXPANDED OPPORTUNITIES FOR MID-LIFE CHANGE OR MID-CAREER DEVELOPMENT.

--- DEGREES OFFERED: STUDENTS MAY EARN A VOCATIONAL CERTIFICATE OR AN ASSOCIATE DEGREE IN MANY PROGRAMS THROUGH EVENING CLASSES OR AN ASSOCIATE DEGREE THROUGH COMPETENCY BASED EDUCATION.

--- LENGTH OF PROGRAM: STUDENTS MAY ENROLL IN THESE COURSES AS THEIR SCHEDULES AND INTERESTS PERMIT. THE LENGTH OF THE PROGRAM VARIES WITH THE INDIVIDUAL.

- - - - - 81001 UNIVERSITY OF MINNESOTA (DULUTH)

--- OBJECTIVES OF THE PROGRAM: DEGREE PROGRAMS, AS WELL AS SELECTED CERTIFICATE PROGRAMS, ARE AVAILABLE TO STUDENTS IN 'CONTINUING EDUCATION AND EXTENSION'. A VARIETY OF SPECIAL EDUCATION-AL OPPORTUNITIES ARE OFFERED. THESE INCLUDE BOTH ON- AND OFF-CAMPUS, UNIVERSITY-LEVEL CERTIFICATES, DEGREES, AND SPECIAL NON-CREDIT CURRICULA. THE INTERCOLLEGE PROGRAM AND INTERDISCIPLINARY STUDIES PROGRAM BOTH OFFER 'INDEPENDENT STUDY'. THESE COURSES OFFER STUDENTS THE OPPORTUNITY TO ENGAGE IN STUDY IN AN AREA NOT COVERED IN REGULAR COURSE OFFERINGS. THE COURSE PROJECTS ARE FREQUENTLY INTERDISCIPLINARY IN SCOPE AND CONTENT AND MAY INVOLVE NONTRADITIONAL TEACHING AND LEARNING RESOURCES.

--- DEGREES OFFERED: TWO YEAR, FOUR YEAR, AND GRADUATE DEGREES ARE AVAILABLE DEPENDING ON THE MAJOR CHOSEN IN CONTINUING EDUCATION AND EXTENSION. AN ASSOCIATE OF ARTS DEGREE AND A BACHELOR OF ARTS DEGREE ARE AVAILABLE FOR PROGRAMS COMPLETED THROUGH INDEPENDENT STUDY.

- - - - - 81002 UNIVERSITY OF MINNESOTA (TWIN CITIES)

--- OBJECTIVES OF THE PROGRAM: THE 'CONTINUING EDUCATION' AND 'EXTENSION DIVISION' PROVIDES STUDENTS WITH THE OPPORTUNITY FOR STUDY IN MANY FIELDS. STUDY MAY OR MAY NOT LEAD TO A DEGREE AND IS OFFERED AT BOTH THE UNDERGRADUATE AND GRADUATE LEVEL. ALSO MANY COLLEGES OF THE UNIVERSITY, INCLUDING THE PROFESSIONAL COLLEGES, OFFER CONTINUING EDUCATION PROGRAMS FOR THEIR GRADUATES OR PEOPLE IN A PARTICULAR FIELD OF WORK. MOST DEPARTMENTS OFFER OPPORTUNITIES FOR INDIVIDUAL STUDY IN REGULAR COURSES OR IN SUBJECTS NOT COVERED IN THE REGULAR CURRICULUM. THROUGH THE 'COLLEGE LEVEL EXAMINATION' PROGRAM (CLEP), CREDITS MAY BE EARNED FOR SPECIFIC COURSES, CREDITS IN REQUIRED SUBJECT AREAS, OR EXEMPTION FROM DEGREE REQUIREMENTS. THROUGH CREDIT BY EXAMINATION, STUDENTS MAY 'TEST OUT' OF CERTAIN COURSES. THROUGH 'DIRECTED' AND 'INDEPENDENT STUDY', ENROLLED STUDENTS HAVE SEVER-AL OPTIONS FOR STUDYING SUBJECTS OF THEIR OWN, COMPLETING 'EXTRA CREDIT,' STUDYING ABROAD, OR COMPLETING INDEPENDENT STUDY PROJECTS AND INTERNSHIPS. MANY CERTIFICATE PROGRAMS ARE AVAILABLE THROUGH CEE TO PEOPLE WHO WISH TO PREPARE FOR EMPLOYMENT OR PROMOTION IN AREAS REQUIRING SPECIALIZED KNOWLEDGE OR SKILLS. 'EXTENSION/CONTINUING EDUCATION FOR WOMEN (CEW)': IF REGULAR DAY SCHOOL OR EVENING CLASSES ARE DIFFICULT OR IMPOSSIBLE TO SCHEDULE, CEW OFFERS CLASSES FOR CREDIT AT THE MACPHAIL CENTER IN DOWNTOWN MINNEAPOLIS.

--- DEGREES OFFERED: SOME PROGRAMS OFFER CONTINUING EDUCATION CREDITS. OTHERS OFFER CERTIFICATES, UNDERGRADUATE DEGREES AND GRADUATE DEGREES. IN MOST COLLEGES OF THE UNIVERSITY, CREDITS EARNED THROUGH INDEPENDENT STUDY MAY BE APPLIED TO TRADITIONAL DEGREE PROGRAMS. THE UNIVERSITY WITHOUT WALLS AND UNIVERSITY SCHOLARS PROGRAMS OFFERED THROUGH UNIVERSITY COLLEGE PROVIDE STUDENTS THE OPPORTUNITY TO EARN DEGREES ENTIRELY THROUGH INDEPENDENT STUDY AND OTHER NONTRADITIONAL LEARNING METHODS.

- - - - - 81004 UNIVERSITY OF MINNESOTA-CROOKSTON TECHNICAL COLLEGE

--- OBJECTIVES OF THE PROGRAM: PEOPLE WHO WANT TO TAKE INDIVIDUAL COURSES OR GROUPS OF COURSES TO MEET PERSONAL NEEDS MAY BE ADMITTED AS ADULT SPECIAL STUDENTS. USUALLY THESE STUDENTS ARE OVER 23 YEARS OLD OR HOLD BACHELOR'S DEGREES.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED.

--- LENGTH OF PROGRAM: ADULT SPECIAL STUDENTS MAY CONTINUE TO TAKE COURSES AS LONG AS THEY LIKE.

- - - - - 82009 DUNWOODY INDUSTRIAL INSTITUTE
--- OBJECTIVES OF THE PROGRAM: THERE ARE 96 VOCATIONAL 'EXTENSION COURSES' OFFERED IN THE EVENING SCHOOL. THERE ALSO ARE SEMINARS, CLINICS, AND SPECIAL SERVICES FOR LABOR AND INDUSTRY.
--- DEGREES OFFERED: A CERTIFICATE OF COMPLETION IS OFFERED.
--- LENGTH OF PROGRAM: THE LENGTH OF THE COURSE VARIES WITH SUBJECT CHOSEN.
--- SPECIAL COSTS: PROGRAM COSTS AND LAB FEES ARE INCLUDED IN THE TUITION. TEXT BOOK COSTS VARY WITH THE PROGRAM.

- - - - - 82023 MINNEAPOLIS BUSINESS COLLEGE
--- OBJECTIVES OF THE PROGRAM: UNDER THE SCHOOL'S 'LIFETIME REFRESHER PRIVILEGE' ANY GRADUATE OF A DIPLOMA COURSE MAY RETURN TO SCHOOL AT ANY TIME, FREE OF CHARGE, AND REVIEW ANY OR ALL OF THE DIPLOMA COURSE COMPLETED.
--- DEGREES OFFERED: NO DEGREE OR CERTIFICATE IS OFFERED.
--- LENGTH OF PROGRAM: GRADUATES ATTEND FOR VARYING PERIODS OF TIME.
--- SPECIAL COSTS: THE COST OF BOOKS AND MATERIALS IS NOT INCLUDED IN THE TUITION.

- - - - - 82034 PALMER WRITERS SCHOOL, INC.
--- OBJECTIVES OF THE PROGRAM: TWO PROGRAMS ARE OFFERED BY THIS SCHOOL: 'FICTION WRITING' AND 'NON-FICTION WRITING'. BOTH OF THESE PROGRAMS ARE OFFERED THROUGH HOME STUDY ONLY. EACH PROGRAM CONSISTS OF 20 LESSONS WHICH HELP PEOPLE IMPROVE THEIR WRITING SKILLS. THE LESSONS IN THE FICTION PROGRAM COVER TOPICS SUCH AS PLANNING, GRAMMAR, STORY STRUCTURE, HUMOR, DIALOGUE, AND CHARACTERIZATION. THE NON-FICTION PROGRAM INCLUDES LESSONS ON PLANNING AND GRAMMAR AS WELL AS NEWS WRITING, WRITING FOR DIFFERENT TYPES OF MAGAZINES, TECHNICAL WRITING, AND BUSINESS WRITING.
--- DEGREES OFFERED: A CERTIFICATE OF GRADUATION IS AWARDED UPON COMPLETION OF THE PROGRAM.
--- LENGTH OF PROGRAM: STUDENTS MAY TAKE UP TO 2 YEARS TO COMPLETE EACH OF THESE PROGRAMS.
--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION FEE (\$1495).

- - - - - 82038 RASMUSSEN SCHOOL OF BUSINESS, INC.
--- OBJECTIVES OF THE PROGRAM: CERTAIN SUBJECTS ARE OFFERED THROUGH THE SCHOOL'S 'ADULT SPECIAL' PROGRAMS. THESE ARE DESIGNED FOR ADULTS WHO WISH TO IMPROVE THEIR SKILLS IN ORDER TO RE-ENTER THE JOB MARKET. IT IS USUALLY NOT NECESSARY FOR THESE STUDENTS TO COMPLETE A DIPLOMA PROGRAM.
--- DEGREES OFFERED: CREDITS EARNED FOR INDIVIDUAL COURSES MAY BE APPLIED TOWARD A DIPLOMA PROGRAM.
--- SPECIAL COSTS: STUDENTS MUST PAY FOR NEEDED TEXTBOOKS AND SUPPLIES. COSTS WILL VARY DEPENDING ON SUBJECTS SELECTED.

- - - - - 82039 ST. CLOUD BUSINESS COLLEGE
--- OBJECTIVES OF THE PROGRAM: THE 'ADULT SPECIAL' PROGRAM IS DESIGNED FOR ADULTS WHO WISH TO UPGRADE THEIR SKILLS, OFTEN FOR RE-ENTRY INTO THE JOB MARKET. THESE STUDENTS MAY SELECT SPECIFIC SUBJECTS THEY WISH TO STUDY RATHER THAN COMPLETING AN ENTIRE DEGREE PROGRAM.
--- DEGREES OFFERED: STUDENTS EARN CREDITS FOR COMPLETED SUBJECTS. ALTHOUGH MOST ADULT SPECIAL STUDENTS DO NOT PURSUE A DIPLOMA, CREDITS EARNED MAY BE APPLIED TO A DIPLOMA PROGRAM.

--- LENGTH OF PROGRAM: THE COURSES VARY IN LENGTH.
--- SPECIAL COSTS: ALL PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 82064 MODEL COLLEGE OF HAIR DESIGN

--- OBJECTIVES OF THE PROGRAM: MODEL COLLEGE OF HAIR DESIGN OFFERS A 'REFRESHER COURSE.' THESE COURSES ARE DESIGNED FOR HAIRDRESSERS WISHING TO RENEW THEIR LICENSE, AFTER A PERIOD OF BEING INACTIVE.

--- DEGREES OFFERED: CERTIFICATES ARE OFFERED UPON COMPLETION OF EACH COURSE.

--- LENGTH OF PROGRAM: THESE PROGRAMS VARY FROM 40-155 HOURS.

--- SPECIAL COSTS: THE PROGRAM RELATED COSTS FOR THE 40 HOUR COURSE IS \$150 AND \$300 FOR THE 155 HOUR COURSE.

- - - - - 82075 ST. CLOUD BEAUTY COLLEGE

--- OBJECTIVES OF THE PROGRAM: AN 'ADVANCED HAIRSTYLING' COURSE IS OFFERED TO PROFESSIONAL BEAUTICIANS ONLY.

--- DEGREES OFFERED: A CERTIFICATE IS OFFERED.

--- LENGTH OF PROGRAM: THE ADVANCED HAIRSTYLING COURSE IS FROM 1 DAY TO 2 WEEKS LONG.

- - - - - 82078 VERA SLATER BEAUTY SCHOOL

--- OBJECTIVES OF THE PROGRAM: 'REFRESHER COURSES' AND 'ADVANCED CLASSES' ARE AVAILABLE TO ALL LICENSED HAIRDRESSERS. THESE CLASSES GIVE STUDENTS THE OPPORTUNITY TO REVIEW THEIR TRAINING, REFRESH THEIR SKILLS, AND LEARN THE NEW TECHNIQUES REQUIRED TO KEEP UP WITH CHANGES IN HAIRSTYLING.

--- DEGREES OFFERED: A CERTIFICATE IS OFFERED.

--- LENGTH OF PROGRAM: STUDENTS MAY ATTEND BY THE CLASS, DAY, WEEK, OR MONTH.

- - - - - 82080 HORST EDUCATION CENTER FOR COSMETOLOGY

--- OBJECTIVES OF THE PROGRAM: 'ADVANCED TRAINING' PROGRAMS ARE OFFERED. ADVANCED TRAINING COURSES COVER THE BASIC AND ADVANCED ASPECTS OF THE HORST TECHNIQUE. THE PROGRAM IS OFFERED TO LICENSED COSMETOLOGISTS AND PROVIDES STUDENTS WITH TRAINING IN PRECISION HAIRCUTTING. STUDENTS ARE ALSO TAUGHT HOW TO DO HAIR DRESSING WITH THE CLIENT IN MIND.

--- DEGREES OFFERED: CERTIFICATES ARE AWARDED UPON COMPLETION OF ANY OF THESE PROGRAMS.

--- LENGTH OF PROGRAM: THE ADVANCED TRAINING SEMINARS ARE USUALLY 3 DAYS LONG (MONDAY, TUESDAY AND WEDNESDAY THROUGHOUT THE YEAR).

--- SPECIAL COSTS: PROGRAM RELATED COSTS ARE INCLUDED IN THE TUITION.

- - - - - 82082 JOHN ROBERT POWERS MODELING AND CAREER SCHOOL

--- OBJECTIVES OF THE PROGRAM: GRADUATES OF THE 'MODELING' PROGRAM MAY RETURN FOR REFRESHER COURSES AT ANY TIME. THESE COURSES ARE TUITION FREE AND ALLOW STUDENTS TO UPDATE AND IMPROVE THEIR MODELING SKILLS AS NEEDED.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED.

--- LENGTH OF PROGRAM: THE REFRESHER COURSES VARY IN LENGTH, DEPENDING ON WHICH AREAS THE STUDENT WISHES TO STUDY.

--- SPECIAL COSTS: A NOMINAL FEE FOR SUPPLIES IS REQUIRED FOR THE REFRESHER COURSE.

- - - - - 83002 CROSIER SEMINARY JUNIOR COLLEGE

--- OBJECTIVES OF THE PROGRAM: MOST DEPARTMENTS OFFER 'SPECIAL TOPICS' COURSES THROUGH WHICH STUDENTS MAY DEVELOP AND PURSUE AN INDEPENDENT STUDY PROJECT. THESE PROJECTS ARE DESIGNED TO ALLOW STUDENTS TO EXPLORE TOPICS

NOT COVERED IN THE USUAL DEPARTMENTAL COURSES.

--- DEGREES OFFERED: CREDITS EARNED THROUGH INDEPENDENT STUDY MAY BE APPLIED TO THE STUDENT'S DEGREE PROGRAM.

--- LENGTH OF PROGRAM: EACH PROJECT WOULD NORMALLY BE 1 SEMESTER LONG.

- - - - - 83003 GOLDEN VALLEY LUTHERAN COLLEGE

--- OBJECTIVES OF THE PROGRAM: LIMITED OPPORTUNITIES FOR 'INDEPENDENT STUDY' ARE AVAILABLE AT GOLDEN VALLEY. STUDENTS MAY DESIGN A 'SPECIAL PROJECT AND HAVE IT APPROVED BY THE DEPARTMENT CHAIRPERSON. TO QUALIFY FOR THIS TYPE OF PROJECT, THE STUDENT MUST HAVE A 3.0 GRADE POINT AVERAGE IN THE DEPARTMENT IN WHICH THE STUDY IS DONE.

--- DEGREES OFFERED: NO DEGREE IS OFFERED, BUT A MAXIMUM OF 6 CREDITS MAY BE APPLIED TOWARD THE ASSOCIATE IN ARTS DEGREE. NOT MORE THAN 4 INDEPENDENT STUDY CREDITS MAY BE TAKEN PER TERM.

--- LENGTH OF PROGRAM: EACH PROJECT LASTS 1 QUARTER.

- - - - - 84011 MINNEAPOLIS COLLEGE OF ART AND DESIGN

--- OBJECTIVES OF THE PROGRAM: THE COLLEGE OFFERS 'EXTENSION PROGRAMS' IN FINE ARTS, LIBERAL ARTS AND DESIGN FOR BEGINNING AND ADVANCED STUDENTS. COURSES ARE SIMILAR TO THOSE OFFERED TO REGULAR ENROLLED STUDENTS. THEY ARE OFFERED DURING THE EVENINGS, SOME DAYS AND ON SATURDAYS DURING THE SCHOOL YEAR AND BOTH DAYS AND EVENINGS DURING THE SUMMER. LIMITED 'INDEPENDENT OFF-CAMPUS STUDY' OPTIONS ARE AVAILABLE TO JUNIOR AND SENIOR STUDENTS. THE PURPOSE OF THIS OPTION IS TO ALLOW STUDENTS TO COMPLETE A PROJECT WHICH WOULD BE BEST ACCOMPLISHED OUTSIDE OF THE CLASSROOM STRUCTURE. ONLY STUDENTS WHO HAVE DEMONSTRATED ABOVE AVERAGE ABILITY MAY PLAN AND PURSUE AN INDEPENDENT OFF-CAMPUS STUDY PROJECT. ALL INDEPENDENT WORK REQUIRES APPROVAL OF A FACULTY MEMBER AND THE DIVISION CHAIRPERSON.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED THROUGH THE EXTENSION PROGRAM. CREDITS EARNED, CLASSES, AND COMPLETION OF AN INDEPENDENT OFF-CAMPUS STUDY PROJECT MAY BE APPLIED TO THE STUDENT'S DEGREE PROGRAM.

- - - - - 84016 COLLEGE OF SAINT BENEDICT

--- OBJECTIVES OF THE PROGRAM: THE CENTER FOR CONTINUING EDUCATION SERVES PART-TIME ADULT LEARNERS FROM ST. JOSEPH, ST. CLOUD, AND THE SURROUNDING COMMUNITIES. ADULTS WHO REGISTER FOR CLASSES THROUGH THE CENTER MAY BE: WOMEN TAKING DAYTIME CLASSES TO COMPLETE A TWO YEAR OR FOUR YEAR DEGREE; MEN AND WOMEN TAKING EVENING CLASSES TO COMPLETE THE CERTIFICATE IN MINISTRY PROGRAM OR THE CERTIFICATE IN MANAGEMENT FOR WOMEN PROGRAM; AND WOMEN TAKING DAY OR EVENING CLASSES FOR PERSONAL SATISFACTION AND GROWTH WITHOUT WORKING TOWARD A DEGREE OR CERTIFICATE. THE 'INDIVIDUAL LEARNING PROJECT' PROGRAM IS DESIGNED FOR STUDENTS WHO WISH TO DESIGN A COLLEGE LEVEL COURSE AND ASSUME RESPONSIBILITY FOR ITS COMPLETION. STUDENTS DEVELOP A COURSE PLAN WHICH IDENTIFIES THE GOALS, PROBLEMS, METHODS, AND RESOURCES OF THE STUDY. THESE LEARNING PROJECTS REQUIRE FACULTY APPROVAL.

--- DEGREES OFFERED: ALL DEGREES OFFERED BY THE COLLEGE ARE AVAILABLE THROUGH CONTINUING EDUCATION. NO DEGREES ARE OFFERED IN THE INDIVIDUAL LEARNING PROJECT PROGRAM, HOWEVER, CREDITS MAY APPLY TO A CHOSEN MAJOR.

- - - - - 84017 COLLEGE OF ST. CATHERINE

--- OBJECTIVES OF THE PROGRAM: THE 'RE-ENTRY ADULT PROGRAM' (REAP) OFFERS COUNSELING AND GUIDANCE FOR STUDENTS WHOSE STUDY HAS BEEN INTERRUPTED AND WHO ARE RETURNING TO COMPLETE A BACHELOR OF ARTS DEGREE OR TO CHANGE THEIR

CAREER GOALS THROUGH ACADEMIC STUDY. 'INDIVIDUAL STUDY' COURSES ARE OFFERED IN MOST DEPARTMENTS. STUDENTS REGISTER FOR EXPERIMENTAL LEARNING, RESEARCH, AND INDIVIDUAL STUDY COURSES. THESE COURSES PROVIDE AN OPPORTUNITY FOR WORK WHICH IS NOT COVERED IN REGULAR COURSES.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED THROUGH CONTINUING EDUCATION, ALTHOUGH STUDENTS MAY CHOOSE TO ENROLL IN A DEGREE PROGRAM. NO DEGREES ARE OFFERED IN INDIVIDUAL STUDY, HOWEVER, CREDITS EARNED MAY APPLY TO THE STUDENTS' DEGREE PROGRAM.

--- 84020 ST. OLAF COLLEGE

--- OBJECTIVES OF THE PROGRAM: THE 'CONTINUING EDUCATION' PROGRAM IS DESIGNED FOR STUDENTS WHO WISH TO TAKE CREDIT COURSES TOWARD A DEGREE OR WHO WISH TO UPDATE THEIR PROFESSIONAL SKILLS AND FOR THOSE WHO WISH TO GAIN KNOWLEDGE OF A SUBJECT AREA FOR THEIR OWN ENRICHMENT. SOME COURSES ARE MAINSTREAMING OF THE EXCEPTIONAL CHILD (THIS WOULD BE FOR PUBLIC SCHOOL TEACHERS); THE ARTS OF EUROPE (FOR PERSONAL ENRICHMENT); AND ACCOUNTING (FOR PERSONS WHO WISH TO UPDATE THEIR PROFESSIONAL SKILLS). SOME OTHER COURSES INCLUDE LEGAL RIGHTS OF WOMEN, WRITERS WORKSHOP, PLANNING AND DEVELOPMENT IN SMALL TOWN MINNESOTA, AND ELEMENTS OF THEATRE. 'INDEPENDENT STUDY' IS AVAILABLE TO PROVIDE INITIAL EXPERIENCES IN VARIOUS KINDS OF INDEPENDENT WORK ON THE CAMPUS AND OFF. THIS CAN INCLUDE SPECIAL READING COURSES, OPPORTUNITIES TO CONTINUE WORK BEGUN IN A REGULAR SEMESTER COURSE, VARIOUS KINDS OF WORK/STUDY OR BEGINNING FIELD RESEARCH OFF-CAMPUS, SUPERVISED WORK IN SMALL GROUPS WITH PROJECTS DESIGNED BY STUDENTS AS WELL AS FACULTY, AND SELF-TEACHING COURSES THAT RELY HEAVILY ON AUDIO-VISUAL HELPS.

--- DEGREES OFFERED: NO DEGREES ARE OFFERED, BUT CREDITS EARNED MAY BE APPLIED TO A DEGREE PROGRAM.

--- 84022 COLLEGE OF SAINT SCHOLASTICA

--- OBJECTIVES OF THE PROGRAM: THE 'EXTENDED PROGRAMS' DIVISION OFFERS CLASSES FOR INTERESTED STUDENTS BOTH ON- AND OFF-CAMPUS. WORKSHOPS AND COURSES ARE OFFERED AT BOTH THE GRADUATE AND UNDERGRADUATE LEVEL, AND MAY OR MAY NOT BE TAKEN FOR CREDIT. COURSES HAVE BEEN DEVELOPED IN A VARIETY OF AREAS IN ORDER TO MEET THE DIVERSE NEEDS OF THE COMMUNITY. FOR THOSE STUDENTS WHO WISH TO PURSUE TOPICS OF PERSONAL INTEREST, EACH DEPARTMENT HAS ESTABLISHED 'INDEPENDENT STUDY' COURSES. THE COLLEGE ALSO OFFERS THE STUDENT THE OPTION TO BECOME INVOLVED IN A DIRECT ACTION PROJECT. THESE PROJECTS ARE FULL-TIME, OFF-CAMPUS LEARNING EXPERIENCES WHICH MAY BE VOLUNTEER OR SALARIED WORK, FOREIGN TRAVEL, AND/OR STUDY. SEVERAL ACADEMIC MAJORS HAVE THESE DIRECT ACTION PROJECTS AS PART OF THEIR COURSE SEQUENCE.

--- DEGREES OFFERED: COURSES MAY BE TAKEN TO MEET THE REQUIREMENTS OF THE VARIOUS DEPARTMENTS AND PROGRAMS, BUT NO FORMAL DEGREE OR CERTIFICATE IS OFFERED.

--- 84023 COLLEGE OF SAINT TERESA

--- OBJECTIVES OF THE PROGRAM: 'CONTINUING EDUCATION' CLASSES ARE HELD ON CAMPUS TO MEET THE VARIOUS EDUCATIONAL NEEDS OF THE COMMUNITY. THIS PROGRAM IS PRIMARILY FOR STUDENTS WHO WISH TO EXPAND THEIR EDUCATIONAL BACKGROUND AND MAY OR MAY NOT BE TAKEN FOR CREDIT. MOST DEPARTMENTS ALLOW STUDENTS TO PURSUE AREAS OF PERSONAL INTEREST THROUGH THE 'INDEPENDENT STUDY' PROGRAM. TOPICS RESEARCHED ARE USUALLY EITHER DIRECTLY OR INDIRECTLY RELATED TO THE INDIVIDUAL DEPARTMENT'S PROGRAMMING GOALS. STUDENTS AND THEIR ADVISORS JOINTLY ESTABLISH THE GOALS AND OBJECTIVES OF THE INDE-

PENDENT STUDY PROJECT. THIS PROGRAM PERTAINS TO ROCHESTER CENTER NOT THE COLLEGE OF SAINT TERESA.

--- DEGREES OFFERED: NO DEGREE IS OFFERED, HOWEVER, CREDITS EARNED MAY BE APPLIED TO A DEGREE PROGRAM.

- - - - - 84024 COLLEGE OF ST. THOMAS

--- OBJECTIVES OF THE PROGRAM: 'NEW COLLEGE' IS THE EVENING AND WEEKEND UNDERGRADUATE DIVISION OF THE COLLEGE OF ST. THOMAS FOR ADULT LEARNERS. THE PROGRAM OFFERS CREDIT COURSES LEADING TO MAJORS IN MANAGEMENT, FINANCIAL MANAGEMENT, ACCOUNTING, HUMAN RESOURCES MANAGEMENT, MARKETING MANAGEMENT, QUANTITATIVE METHODS AND COMPUTER SCIENCE, CRIMINAL JUSTICE, PUBLIC ADMINISTRATION AND SOCIAL SCIENCES. IN ADDITION, A SERIES OF NONCREDIT, SHORT-TERM MINICOURSES IN A VARIETY OF SPECIAL INTEREST AREAS ARE OFFERED. FOR INFORMATION CALL (612) 647-5322. THE CENTER FOR SENIOR CITIZENS EDUCATION OFFERS A 'SENIOR CITIZENS GO TO COLLEGE PROGRAM' WHICH ALLOWS PERSONS 55 YEARS OF AGE OR OLDER TO ENROLL IN CLASSES FREE OF CHARGE AS NON-CREDIT AUDITORS ON A SPACE AVAILABLE BASIS EACH SEMESTER. IN ADDITION, A SERIES OF 'SPECIAL' PROGRAMS IS OFFERED EACH ACADEMIC YEAR SUCH AS 'EDUCATIONAL SERVICES IN RETIREMENT PLANNING', 'PERSONAL FINANCE FOR SENIOR CITIZENS IN AN URBAN COMMUNITY'. COURSES IN 'INDIVIDUAL STUDY' ARE OFFERED BY THE VARIOUS DEPARTMENTS. COURSE WORK ALLOWS THE STUDENT TO PURSUE AREAS OF INTEREST RELATED TO THE DEPARTMENT'S ESTABLISHED GOALS AND OBJECTIVES.

--- DEGREES OFFERED: A BACHELOR OF ARTS DEGREE IS OFFERED IN THE NEW COLLEGE PROGRAM. NO DEGREE IS OFFERED IN THE 'SENIOR CITIZENS GO TO COLLEGE PROGRAM'. NO DEGREE IS OFFERED IN INDIVIDUAL STUDY, HOWEVER, CREDITS EARNED MAY BE APPLIED TO THE STUDENT'S DEGREE REQUIREMENTS.

- - - - - 85002 LUTHER NORTHWESTERN THEOLOGICAL SEMINARY

--- OBJECTIVES OF THE PROGRAM: THE 'CONTINUING EDUCATION' PROGRAM OFFERS LECTURES, DISCUSSIONS, AND SEMINARS FOR STUDENTS AND PARISH PASTORS TO BE OF SPECIAL HELP IN THE TASKS AND MISSION OF MINISTRY IN THE CONGREGATION. THESE SPECIAL PROGRAMS MAY BE EITHER ON- OR OFF-CAMPUS. AN 'INDEPENDENT STUDY' PROGRAM IS OFFERED TO STUDENTS WHO WISH TO PURSUE AN AREA OF STUDY NOT OTHERWISE OFFERED BY THE SCHOOL'S CURRICULUM. STUDENTS AND THEIR ADVISORS SET UP THE GOALS AND OBJECTIVES OF THE READING AND RESEARCH THAT WILL BE ACCOMPLISHED. STUDENTS ARE INDIVIDUALLY EVALUATED AS TO WHETHER THE REQUIREMENTS HAVE BEEN SATISFACTORILY MET.

--- DEGREES OFFERED: NO DEGREE OR CERTIFICATE IS AWARDED, HOWEVER, CREDITS EARNED IN INDEPENDENT STUDY MAY BE APPLIED TOWARD A DEGREE PROGRAM.