

# Accounting

Accounting A.A.S. Degree .....	72 credits
Accountant Diploma .....	64 credits
Accounting Clerk Diploma .....	32 credits

## Major Description

Accounting students learn to analyze, interpret and record accounting data. Students will learn how to prepare financial statements, tax returns and government forms. They will become knowledgeable in state and federal tax laws and payroll laws. Students will gain experience with a variety of computer software: word processing, spreadsheet and accounting applications.

## Nature of Work

The accountant's work is among the most important function in any business. Duties may include budgeting, maintaining accounting systems, compiling financial statements, preparing state and federal tax reports, analyzing cost variances, and interpreting results of analysis. The duties will vary depending on the size and nature of the business.

## Career Opportunities

Graduates find challenging accounting careers in companies of all sizes, as well as in accounting firms and government agencies.

## Program Delivery

Students can begin this program fall or spring semester. Some evening classes may be offered, but it is primarily a day program. Full- or part-time starts are available.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Bemidji State University, Southwest State University, Cardinal Stritch and Saint Mary's University. See Career Services for more information.

## Student Outcomes

1. Graduates of the Accounting program will be prepared for employment in the accounting field.
2. Students will have knowledge of computer software and hardware and its application to accounting and financial analysis.

3. Students will have knowledge of accounting, including financial, cost, auditing and tax.
4. See General Education section for general education outcomes statement.

## Accounting A.A.S. Degree

Courses		Cr
ACCT1000	Principles of Accounting I	4
ACCT1003	Principles of Accounting II	4
ACCT1100	Business Law and Ethics	3
ACCT1106	Accounting Mathematics	3
ACCT1206	Payroll Accounting	2
ACCT1306	Spreadsheets	3
ACCT1406	Income Tax	4
ACCT2000	Intermediate Accounting I	4
ACCT2003	Intermediate Accounting II	4
ACCT2100	Cost Accounting I	4
ACCT2103	Cost Accounting II	4
ACCT2200	Accounting Computer Applications I	3
ACCT2203	Accounting Computer Applications II	3
ACCT2306	Auditing	3
Total		48

## Technical Electives

Students may select as an elective any course listed in the Accounting Careers (ACCT), Computer Careers (COMC), or Office Careers (OFFC) curriculums upon approval of advisor.

Total	4
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## General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	20
<b>TOTAL Program Requirements</b>	<b>72</b>

## Accountant Diploma

Courses		Cr
ACCT1000	Principles of Accounting I	4
ACCT1003	Principles of Accounting II	4
ACCT1100	Business Law and Ethics	3
ACCT1106	Accounting Mathematics	3
ACCT1206	Payroll Accounting	2
ACCT1306	Spreadsheets	3
ACCT1406	Income Tax	4
ACCT2000	Intermediate Accounting I	4
ACCT2003	Intermediate Accounting II	4

ACCT2100	Cost Accounting I	4
ACCT2103	Cost Accounting II	4
ACCT2200	Accounting Computer Applications I	3
ACCT2203	Accounting Computer Applications II	3
ACCT2306	Auditing	3
Total		48

#### Technical Electives

Students may select as an elective any course listed in the Accounting Careers (ACCT), Computer Careers (COMC), or Office Careers (OFFC) curriculums upon approval of advisor.

Total	7
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#### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	9
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<b>TOTAL Program Requirements</b>	<b>64</b>
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## Accounting Clerk Diploma

Courses	Cr	
ACCT1000	Principles of Accounting I	4
ACCT1003	Principles of Accounting II	4
ACCT1100	Business Law and Ethics	3
ACCT1106	Accounting Mathematics	3
ACCT1206	Payroll Accounting	2
ACCT1306	Spreadsheets	3
ACCT1406	Income Tax	4
Total		23

#### Technical Electives

Students may select as an elective any course listed in the Accounting Careers (ACCT), Computer Careers (COMC), or Office Careers (OFFC) curriculums upon approval of advisor.

Total	3
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#### General Education

The following courses are required:

COML1400	Introduction to Computers	3
ENGL1100	Writing and Research Skills	3

Total	6
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<b>TOTAL Program Requirements</b>	<b>32</b>
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# Why DCTC?

Besides our programs and focus on technology, there are plenty of other great reasons for attending DCTC.

### 94% Job Placement

Year after year, we place more than 94% of our graduates in their field within six months of graduation. And as always, we offer life-time placement assistance to graduates.

### Working with Business

At DCTC, you'll find examples where our partnerships with local, state and national businesses benefit our students. Thanks to the work of our program advisory committees, we maintain active partnerships with more than 500 businesses and industries to ensure that students are receiving the skills employers are seeking, using the latest technology possible.

### Instructors who Live It

Our instructors don't just know this stuff, they live it. Instructors at DCTC have worked extensively in their professions and remain active in the industry. They bring their business and industry experience into their classrooms, shops, labs and studios. And our instructors do more than teach - they advise and mentor students. They make themselves available to students not just for help in coursework, but for help in achieving results, whether that's finding a new job or improving a current one.

### Partners in Education

DCTC has transfer agreements with many colleges and universities. These agreements provide the steps that can help students continue their education toward further certificates, diplomas and degrees. For more information on transfer agreements, visit Career Services.

## 6 Steps to a Successful Start

- Attend a Tuesday Campus Visit.**  
 12:45-2:30 p.m. every Tuesday, no appointment necessary (evening appointments also available)  
**651-423-8020**
- Apply for Admission w/\$20 Fee.**  
 Applications are available on the college web site ([www.dctc.edu](http://www.dctc.edu)) or in Student Services  
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# *Administrative Assistant*

Administrative Assistant Diploma . . . . .	32 credits
General Office Assistant Certificate . . . . .	21 credits
Clerical Assistant Certificate . . . . .	12 credits

## Major Description

The Administrative Assistant major prepares students for employment in administrative support. Students will use computer systems for document processing and file management tasks. In addition, the administrative assistant may perform duties such as handling mail, filing and retrieving records, and handling telephone calls. The General Office Assistant and Clerical Assistant majors offer the student an opportunity to work with some of these skills in a more condensed version of the program.

## Nature of Work

The administrative assistant uses various software packages to record, edit, and store correspondence, reports, and statistical tables and forms from a variety of sources.

## Career Opportunities

Graduates find employment in administrative support in a variety of businesses, including insurance companies, banks, manufacturing firms and government agencies.

## Program Delivery

Students can begin this program fall or spring semester. Courses are offered primarily during the day, however there are some evening and Flextime Lab classes available.

## MOS Certification

DCTC offers courses to prepare students for the Microsoft Office Specialist (MOS) certification exam. MOS is the globally recognized standard for validating expertise with the Microsoft Office suite of business productivity software. For more information call 651-423-8428.

## Program Prerequisite

A three-minute typing test will be given before students can take Keyboarding/Formatting. They must achieve a speed of 35 words per minute with five or fewer errors to begin the course. If students do not type at this level, they must successfully complete Basic Keyboarding (OFFC1000) prior to registering for OFFC1005 Keyboarding/Formatting.

## Student Outcomes

1. Graduates will be prepared for immediate employment in their respective fields.
2. Graduates will have successfully completed coursework in a simulated office environment.
3. Graduates will be able to utilize software applications to produce mailable documents
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Administrative Assistant Diploma

Courses		Cr
OFFC1005	Keyboarding/Formatting	3
OFFC1010	Business English Skills	2
OFFC1017	Technology for the Business Professional	3
OFFC1020	Office Procedures	4
OFFC1030	Word Processing	3
OFFC1040	Integrated Office Skills	3
OFFC1230	MS Publisher	2
OFFC1250	Introduction to MS Windows XP	2
OFFC1285	Oral Business Comm./Job Seeking Skills	2
OFFC1290	Written Business Communications	2
Total		26

## General Education

The following courses are required:

COML1400	Introduction to Computers	3
SPEE1020	Interpersonal Communication	3
Total		6
<b>TOTAL Program Requirements</b>		<b>32</b>

## General Office Assistant Certificate

Courses		Cr
OFFC1005	Keyboarding/Formatting	3
OFFC1010	Business English Skills	2
OFFC1020	Office Procedures	4
OFFC1285	Oral Business Comm./Job Seeking Skills	2
OFFC1290	Written Business Communications	2
Total		13

## Technical Electives

Students may select as an elective any course listed in the Accounting Careers (ACCT), Computer Careers (COMC), Graphic Design Technology (VCOM), or Office Careers (OFFC) curriculums upon approval of advisor.

Total		2
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### General Education

The following courses are required:

COML1400	Introduction to Computers	3
SPEE1020	Interpersonal Communication	3
Total		6
<b>TOTAL Program Requirements</b>		<b>21</b>

### Clerical Assistant Certificate

Courses		Cr
OFFC1005	Keyboarding/Formatting	3
OFFC1010	Business English Skills	2
OFFC1285	Oral Business Comm./Job Seeking Skills	2
OFFC1290	Written Business Communications	2
Total		9

### General Education

The following course is required:

SPEE1020	Interpersonal Communication	3
Total		3
<b>TOTAL Program Requirements</b>		<b>12</b>

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### Instructors who Live It

Our instructors don't just know this stuff, they live it. Instructors at DCTC have worked extensively in their professions and remain active in the industry. They bring their business and industry experience into their classrooms, shops, labs and studios. And our instructors do more than teach - they advise and mentor students. They make themselves available to students not just for help in coursework, but for help in achieving results, whether that's finding a new job or improving a current one.

### Partners in Education

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# Applied Visual Arts

Applied Visual Arts A.A.S. Degree .....72 credits  
 Applied Visual Arts Diploma .....64 credits

## Major Description

Few career opportunities offer more excitement and chances for creative expression than fields in Applied Visual Arts. Visual merchandisers work with promotion planners, designers, and graphic specialists to create exciting, artistic effects that are seen by thousands of customers and other professionals. Students may learn display and many other art applications such as illustration, design, advertising, commercial art, scale and perspective, airbrush, creative problem-solving, special events and exhibit design. Other classes emphasize computer skills in many related areas.

## Nature of Work

A visual arts career is a profession of imaginary and creative expression and can range from planning and constructing creative displays and coordinating promotions to communicating with visual presentation representatives. Many students take the opportunity to start their own business in a creative field, as the education in this field is diversified and covers a myriad of creative professions. High-level computer technical training is a major part of the program.

## Career Opportunities

Skilled visual artists find scores of challenging careers in retail stores, prop and set design areas, art departments and industrial design areas. Artists in the commercial field may design signage, identity systems, illustrate, or work in many other artistic and computer design-related areas.

## Program Delivery

Students can begin this program fall or spring semester. Courses are primarily offered during the day, however some courses are made available in the evening. Full- or part-time starts are available.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Metropolitan State University, Southwest State University and Saint Mary's University. See Career Services for more information.

## Student Outcomes

1. Graduates completing the program will be prepared for employment in the visual arts field.
2. Students may have the opportunity for work experience through internship and/or shadowing.
3. Students will develop visual presentation, design, computer application, and creative problem-solving skills.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Applied Visual Arts A.A.S. Degree

(Pending MnSCU Board approval)

Courses	Cr
VCOM1001 Introduction to Visual Communications	2
VCOM1006 Color Theory	2
VCOM1010 Introduction to Photoshop	2
VCOM1015 Layout I	2
VCOM1021 Introduction to Photography	3
VCOM1030 Visual Design Fundamentals	3
VCOM1040 Basic Drawing	3
VCOM1051 Scale and Perspective	2
VCOM1060 Creative Problem Solving	3
VCOM1095 Illustration Fundamentals	3
VCOM1400 Intro to QuarkXpress OR	2
VCOM1430 Intro to InDesign	
VCOM1410 Introduction to Illustrator	2
VCOM1415 Typography Fundamentals	2
VCOM2000 VisCom Career/Portfolio Development	2
VCOM2035 Layout II	3
VCOM2100 Portfolio Development (Applied Arts)	2
VCOM2085 Drawing for Illustration	2
VCOM2095 Painting for Illustration	2
VCOM2420 Advanced Computer Illustration	3
Total	45

## Technical Electives

Students may select as an elective any course listed in Visual Communications (VCOM) upon approval of advisor. Other courses may be approved depending on student focus.

Total	7
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## General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	20
<b>TOTAL Program Requirements</b>	<b>72</b>

## Applied Visual Arts Diploma

Courses	Cr
VCOM1001 Introduction to Visual Communications	2
VCOM1006 Color Theory	2
VCOM1010 Introduction to Photoshop	2
VCOM1015 Layout I	2
VCOM1021 Introduction to Photography	3
VCOM1030 Visual Design Fundamentals	3
VCOM1040 Basic Drawing	3
VCOM1051 Scale and Perspective	2
VCOM1060 Creative Problem Solving	3
VCOM1095 Illustration Fundamentals	3
VCOM1400 Intro to QuarkXpress OR	2
VCOM1430 Intro to InDesign	
VCOM1410 Introduction to Illustrator	2
VCOM1415 Typography Fundamentals	2
VCOM2000 VisCom Career/Portfolio Development	2
VCOM2035 Layout II	3
VCOM2100 Portfolio Development (Applied Arts)	2
VCOM2085 Drawing for Illustration	2
VCOM2095 Painting for Illustration	2
VCOM2420 Advanced Computer Illustration	3
<b>Total</b>	<b>45</b>

## Technical Electives

Students may select as an elective any course listed in Visual Communications (VCOM) upon approval of advisor. Other courses may be approved depending on student focus.

Total	10
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## General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	9
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<b>TOTAL Program Requirements</b>	<b>64</b>
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### Instructors who Live It

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### Partners in Education

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# Architectural Technology

Architectural Technology A.A.S. Degree . . . . .72 credits  
 Architectural Technology Diploma . . . . .64 credits

## Major Description

Students use design techniques and procedures to develop and prepare construction drawings for residential, light commercial, and commercial buildings. Students work in an environment that is patterned after the most advanced architectural offices. Students are introduced to computers and taught computer-aided design and drafting (CADD). Realistic architectural projects in the course of study provide an excellent mix of technical training and creative problem solving.

## Nature of Work

Skilled architectural technicians are involved in the exciting work of producing actual construction documents, presentation drawings and architectural models. Their work requires the skillful use of drafting equipment and computer programs. As architectural technicians acquire experience, they will be required to coordinate structural, mechanical and electrical design elements for a building project.

## Career Opportunities

Graduates of this program may find employment in an architectural firm, a professional design office, construction, product sales, estimating or managerial departments of construction firms or material manufacturing companies. The Twin Cities continues to be an excellent area for placement; however, many graduates have been successful in securing employment in other locations throughout the state.

## Program Delivery

Students can begin this program in the fall semester only. Courses are offered during the day. A full-time start is preferred.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Bemidji State University, Minnesota State University Moorhead, Southwest State University, the University of Minnesota–Crookston, and Saint Mary’s University. See Career Services for more information.

## Student Outcomes

1. Graduates completing the Architectural Technology program will be prepared for employment as architectural technicians in the construction industry.

2. Students will demonstrate current computer-aided design technology proficiency.
3. Students will present themselves as practicing professionals in Architectural Technology.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Architectural Technology A.A.S. Degree

Courses	Cr
ARCT1100 Architectural Studio I	8
ARCT1103 Building Technology I	3
ARCT1107 CAD I	3
ARCT1200 Architectural Studio II	8
ARCT1203 Building Technology II	3
ARCT1207 CAD II	3
ARCT2100 Architectural Studio III	8
ARCT2103 Building Technology III	3
ARCT2107 CAD III	3
ARCT2200 Architectural Studio IV	5
ARCT2970 Internship	5
Total	52

## General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	20
<b>TOTAL Program Requirements</b>	<b>72</b>

## Architectural Technology Diploma

Courses	Cr
ARCT1100 Architectural Studio I	8
ARCT1103 Building Technology I	3
ARCT1107 CAD I	3
ARCT1200 Architectural Studio II	8
ARCT1203 Building Technology II	3
ARCT1207 CAD II	3
ARCT2100 Architectural Studio III	8
ARCT2103 Building Technology III	3
ARCT2107 CAD III	3
ARCT2200 Architectural Studio IV	5
ARCT2970 Internship	8
Total	55

## General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	9
<b>TOTAL Program Requirements</b>	<b>64</b>

# Auto Body Collision Technology

Auto Body Collision Technology A.A.S. Degree . . . . .	72 credits
Auto Body Collision Technology Diploma . . . . .	64 credits
Body Technician Certificate . . . . .	28 credits
Paint Preparation Certificate . . . . .	21 credits
Estimator Certificate . . . . .	14 credits

## Major Description

Auto body collision technicians are the skilled professionals who repair damaged vehicles. Repairing today's technological-ly advanced cars requires knowledge and training in metals, plastics, structural repairs and other areas that require the use of specialized equipment. The instruction will involve classroom theory, demonstrations, and repair of customers' cars. Making actual repairs on vehicles plays a major role in skill development. Students will train on school-supplied shop equipment that uses the latest technology. Technicians already in the field can update their knowledge by registering for specific courses. Auto body work is an exciting profession because each damaged vehicle presents a new and different challenge.

**Automotive Restoration:** Automotive Restoration courses are designed for hobbyists looking to improve their skills in the restoration of automotive sheet metal. The class includes welding, rust repair procedures, sheet metal straightening techniques and plastic filler usage. Students are required to supply their own tools.

## Nature of Work

Auto body collision technicians repair or replace body panels, structural panels, glass, trim and mechanical components. Understanding body alignment, welding, plastic repair, painting and estimating is critical to the profession

## Career Opportunities

Skilled graduates find challenging careers as body, frame, or paint technicians, adjusters, appraisers and managers in automobile dealerships, independent body shops, specialty shops and insurance companies. Students have the opportunity to gain I-Car Gold Points, along with the regular curriculum to gain additional employability qualifications.

## Program Delivery

Students can begin this program in the fall semester only. Courses are offered during the day. A full-time start is preferred.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Bemidji State University, Minnesota State University Moorhead, Southwest State University and Saint Mary's University. See Career Services for more information.

## Student Outcomes

1. Students completing the program will be prepared for employment in the auto body repair field.
2. Graduates will be able to accurately diagnose and repair vehicle damage to all body-damaged vehicles.
3. Graduates will be provided actual hands-on experience by working on customer vehicles.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Auto Body Collision Technology

### A.A.S. Degree

Courses		Cr
ABCT1111	Collision Repair Welding I	2
ABCT1120	Sheet Metal Repair	5
ABCT1130	Refinishing Preparation I	2
ABCT1142	Glass, Trim and Hardware	4
ABCT1150	Reconditioning and Detailing	2
ABCT1212	Collision Repair Welding II	2
ABCT1214	Refinishing Preparation II	3
ABCT1216	Refinishing Application	5
ABCT1230	Auto Body Plastic Repair	2
ABCT2100	Body Electrical	2
ABCT2102	Shop Management and Estimating	2
ABCT2106	Collision Damage Repair/Replacement	6
ABCT2108	Unibody/Frame/Wheel Alignment I	4
ABCT2212	Unibody/Frame/Wheel Alignment II	6
ABCT2230	Body Mechanical and Air Conditioning	3
ABCT2970	Autobody Internship	2
Total		52

### General Education

See the General Education section of this college catalog.

Total	20
<b>TOTAL Program Requirements</b>	<b>72</b>



## Auto Body Collision Technology Diploma

Courses	Cr
ABCT1111 Collision Repair Welding I	2
ABCT1120 Sheet Metal Repair	5
ABCT1130 Refinishing Preparation I	2
ABCT1142 Glass, Trim and Hardware	4
ABCT1150 Reconditioning and Detailing	2
ABCT1212 Collision Repair Welding II	2
ABCT1214 Refinishing Preparation II	3
ABCT1216 Refinishing Application	5
ABCT1230 Auto Body Plastic Repair	2
ABCT2100 Body Electrical	2
ABCT2102 Shop Management and Estimating	2
ABCT2106 Collision Damage Repair/Replacement	6
ABCT2108 Unibody/Frame/Wheel Alignment I	4
ABCT2212 Unibody/Frame/Wheel Alignment II	6
ABCT2230 Body Mechanical and Air Conditioning	3
ABCT2970 Autobody Internship	5
<b>Total</b>	<b>55</b>

### General Education

See the General Education section of this college catalog.

Total	9
<b>TOTAL Program Requirements</b>	<b>64</b>

## Body Technician Certificate

Courses	Cr
ABCT1111 Collision Repair Welding I	2
ABCT1120 Sheet Metal Repair	5
ABCT1142 Glass, Trim and Hardware	4
ABCT1212 Collision Repair Welding II	2
ABCT2100 Body Electrical	2
ABCT2106 Collision Damage Repair/Replacement	6
ABCT2108 Unibody/Frame/Wheel Alignment I	4
ABCT2230 Body Mechanical and Air Conditioning	3
<b>Total</b>	<b>28</b>
<b>TOTAL Program Requirements</b>	<b>28</b>

## Paint Preparation Certificate

Courses	Cr
ABCT1130 Refinishing Preparation I	2
ABCT1142 Glass, Trim and Hardware	4
ABCT1150 Reconditioning and Detailing	2
ABCT1214 Refinishing Preparation II	3
ABCT1216 Refinishing Application	5
ABCT1230 Auto Body Plastic Repair	2
<b>Total</b>	<b>18</b>

### General Education

Students may select one course from the following:

COML1400 Introduction to Computers	3
ENGL1102 Technical Written Communication	3
SPEE1020 Interpersonal Communication	3
<b>Total</b>	<b>3</b>
<b>TOTAL Program Requirements</b>	<b>21</b>

## Estimator Certificate

Courses	Cr
ABCT1120 Sheet Metal Repair	5
ABCT2102 Shop Management and Estimating	2
ABCT2108 Unibody/Frame/Wheel Alignment I	4
<b>Total</b>	<b>11</b>

### General Education

Students may select one course from the following:

COML1400 Introduction to Computers	3
ENGL1102 Technical Written Communication	3
SPEE1020 Interpersonal Communication	3
<b>Total</b>	<b>3</b>
<b>TOTAL Program Requirements</b>	<b>14</b>

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**651-423-8038**

# *Automotive Service Education Program (ASEP)*

Automotive Service A.A.S. Degree . . . . .87 credits

## **Major Description**

Because of Dakota County Technical College's cooperation with General Motors, students can become highly-specialized service technicians for General Motors dealers. The Automotive Service Educational Program (ASEP) makes specialized knowledge of General Motors products a valuable asset. The two-year major strengthens academic skills while focusing on technical automotive training.

Through ASEP, students gain paid work experience at a sponsoring General Motors dealership allowing them to apply classroom learning to real world situations. Half of the student's time is spent at Dakota County Technical College. The remainder is spent with a sponsoring General Motors dealer.

ASEP labs are equipped with the latest General Motors technology including vehicles, components, training aids and technical information. Through ASEP, General Motors can rely on a staff of trained technicians whose knowledge of the company's computer-oriented product will keep pace with tomorrow's technology.

## **Nature of Work**

ASEP prepares students for employment in General Motors dealerships. The automotive technician diagnoses, repairs and services General Motors vehicles. Technicians use up-to-date testing equipment and procedures necessary for the new technology in today's vehicles.

## **Career Opportunities**

Employment opportunities are plentiful for service technicians, advisors, and managers.

## **Program Delivery**

Students can begin this program in the fall semester only. Courses are offered during the day. A full-time start is preferred. The semester is split between the DCTC's main campus and the sponsoring General Motors dealership.

## **After DCTC**

DCTC has transfer agreements for this program with the following colleges: Bemidji State University, Minnesota State University Moorhead, Southwest State University and Saint Mary's University. See Career Services for more information.

## **Admissions Requirements**

### **Computerized Placement Test Requirements**

Applicants to this program must take the Computerized Placement Test (CPT) unless they have a prior two- or four-year degree. Acceptance into ASEP will be based on a score of 50% or greater on both the reading comprehension and sentence skills portion of the CPT. Applicants not meeting these scores must take the appropriate developmental courses first and then retest before being accepted into the program.

### **Additional Admissions Requirements**

Applicants to this program must also take a written Mechanical Reasoning Test and achieve a score of 37 or higher to be eligible for acceptance. Applicants who achieve qualifying scores on the CPT and Mechanical Reasoning Tests will then be given a Dealer Sponsor Form by the ASEP faculty. Both the student and the GM dealer who has agreed to sponsor the student must complete this form. After the form is completed it should be returned to the ASEP faculty.

## **Student Outcomes**

1. Students completing the two-year Associate in Applied Science degree program will be prepared for immediate employment in the automotive service industry.
2. Graduates will be able to repair and maintain General Motors vehicles.
3. Students will gain experience by providing automotive service work during the internship component.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Automotive Service A.A.S. Degree

Courses	Cr
ASEP1101 Automotive Fundamentals	3
ASEP1102 Electrical and Fuel Systems	3
ASEP1103 Driveability	3
ASEP1104 Body Electronics	3
ASEP1105 Heating and Air Conditioning	3
ASEP1108 Brake Systems	3
ASEP1201 Dealer Work Experience I	8
ASEP1202 Dealer Work Experience II	8
ASEP1204 Dealer Work Experience IV	8
ASEP1205 Dealer Work Experience V	8
ASEP1212 Advanced Diagnostics/New Model Update	1
ASEP2107 Steering and Suspension	2
ASEP2110 Automatic Transmissions	3
ASEP2111 Engines	3
ASEP2209 Driveline and Four-Wheel Drive	3
ASEP2303 Dealer Work Experience III	5
<b>Total</b>	<b>67</b>

## General Education

These classes are recommended to fulfill the General Education requirements for an Associate in Applied Science degree:

ENGL1100 Writing and Research Skills	3
COML1400 Introduction to Computers	3
SPEE1020 Interpersonal Communication	3
INTS1000 College Success Strategies	2
BIOL1110 Environmental Science	3
SOCY1010 Marriage and Family	3
PSYC1100 General Psychology	3
<b>Total</b>	<b>20</b>
<b>TOTAL Program Requirements</b>	<b>87</b>

# 6 Steps to a Successful Start

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# Why DCTC?

**Besides our programs and focus on technology, there are plenty of other great reasons for attending DCTC.**

## 93% Job Placement

Year after year, we place more than 93% of our graduates in their field within six months of graduation. And as always, we offer life-time placement assistance to graduates.

## Working with Business

At DCTC, you'll find examples where our partnerships with local, state and national businesses benefit our students. Thanks to the work of our program advisory committees, we maintain active partnerships with more than 500 businesses and industries to ensure that students are receiving the skills employers are seeking, using the latest technology possible.

## Instructors who Live It

Our instructors don't just know this stuff, they live it. Instructors at DCTC have worked extensively in their professions and remain active in the industry. They bring their business and industry experience into their classrooms, shops, labs and studios. And our instructors do more than teach - they advise and mentor students. They make themselves available to students not just for help in coursework, but for help in achieving results, whether that's finding a new job or improving a current one.

## Partners in Education

DCTC has transfer agreements with many colleges and universities. These agreements provide the steps that can help students continue their education toward further certificates, diplomas and degrees. For more information on transfer agreements, visit Career Services.

# *Automotive Technician*

Automotive Technician A.A.S. Degree . . . . .	72 credits
Automotive Technician Diploma . . . . .	65 credits
Driveability Certificate . . . . .	20 credits
Drivetrain/Transmission Certificate . . . . .	20 credits
Engines/General Automotive Certificate . . . . .	20 credits
Brakes, Suspension & Electrical Certificate . . . . .	17 credits

## Major Description

The automotive technician is one of today's most skilled professionals. Students will learn to maintain and repair the engine, chassis, drive train, front-wheel drive, fuel injection and modern electrical and emission systems. The instruction will involve classroom theory, demonstrations, computer applications and repair of automobiles. Making repairs on vehicles plays a vital role in skill development. Technicians already in the field can update their knowledge by registering for individual automotive technical courses.

## Nature of Work

Automotive technicians use their analytical ability to quickly and accurately diagnose mechanical problems including engine and transmission, fuel injection, suspension, and electrical systems. Technicians use a variety of current, state-of-the-art equipment, hand and power tools and aligning equipment to return vehicles safely to the road.

## Career Opportunities

Automotive technicians find jobs at dealerships and independent and specialty shops. A graduate can find a challenging career as a technician, service manager, sales representative, factory representative, service writer or shop owner.

## Program Delivery

Students can begin this program in the fall or spring semester. Courses are offered during the day. A full-time start is preferred.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Bemidji State University, Minnesota State University Moorhead, Cardinal Stritch, Southwest State University, the University of Minnesota– Crookston and Saint Mary's University. See Career Services for more information.

## Student Outcomes

1. Graduates of the Automotive Technician program will be prepared for employment in the automotive technician field.
2. Students will accurately diagnose mechanical problems.
3. Students will have the knowledge to repair vehicles through engine overhaul, drive train overhaul, suspension overhaul, driveability service and electrical troubleshooting.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Automotive Technician A.A.S. Degree

Courses	Cr
AUTM2000 Basic Automotive Electrical/Battery	3
AUTM2010 Suspension, Steering, & Alignment Systems	4
AUTM2020 Brakes	4
AUTM2031 Differential and Four-Wheel Drive	3
AUTM2120 Engine Overhaul, Theory, Diagnosis, & Repair	8
AUTM2136 Heating, Ventilation, and Air Conditioning	3
AUTM2200 Manual Transmissions, Transaxle & Clutches	4
AUTM2210 Basic Automatic Transmission/Transaxle	5
AUTM2220 Advanced Automatic Transmission/Transaxle	5
AUTM2301 Driveability and Emissions	4
AUTM2310 Body and Engine Electrical Systems	4
AUTM2320 Automotive Computers and Fuel Injection	5
Total	52

## General Education

See the General Education section of this college catalog.

Total	20
<b>TOTAL Program Requirements</b>	<b>72</b>

## Automotive Technician Diploma

Courses	Cr
AUTM2000 Basic Automotive Electrical/Battery	3
AUTM2010 Suspension, Steering, & Alignment Systems	4
AUTM2020 Brakes	4
AUTM2031 Differential and Four-Wheel Drive	3
AUTM2120 Engine Overhaul, Theory, Diagnosis, & Repair	8
AUTM2136 Heating, Ventilation, and Air Conditioning	3
AUTM2140 General Automotive	3
AUTM2200 Manual Transmissions, Transaxle & Clutches	4
AUTM2210 Basic Automatic Transmission/Transaxle	5
AUTM2220 Advanced Automatic Transmission/Transaxle	5

AUTM2300	Driveability and Emissions	5
AUTM2310	Body and Engine Electrical Systems	4
AUTM2320	Automotive Computers and Fuel Injection	5
Total		56

#### General Education

See the General Education section of this college catalog.

Total		9
<b>TOTAL Program Requirements</b>		<b>65</b>

#### Driveability Certificate

Courses	Cr	
AUTM2000 Basic Automotive Electrical/Battery	3	
AUTM2300 Driveability and Emissions	5	
AUTM2310 Body and Engine Electrical Systems	4	
AUTM2320 Automotive Computers and Fuel Injection	5	
Total		17

#### General Education

Students may select one course from the following:

COML1400	Introduction to Computers	3
ENGL1100	Writing and Research Skills	3
ENGL1102	Technical Written Communications	3
SPEE1020	Interpersonal Communication	3
Total		3
<b>TOTAL Program Requirements</b>		<b>20</b>

#### Drivetrain/Transmission Certificate

Courses	Cr	
AUTM2000 Basic Automotive Electrical/Battery	3	
AUTM2200 Manual Transmissions, Transaxle & Clutches	4	
AUTM2210 Basic Automatic Transmission/Transaxle	5	
AUTM2220 Advanced Automatic Transmission/Transaxle	5	
Total		17

#### General Education

Students may select one course from the following:

COML1400	Introduction to Computers	3
ENGL1100	Writing and Research Skills	3
ENGL1102	Technical Written Communications	3
SPEE1020	Interpersonal Communication	3
Total		3
<b>TOTAL Program Requirements</b>		<b>20</b>

#### Engines/General Automotive Certificate

Courses	Cr	
AUTM2000 Basic Automotive Electrical/Battery	3	
AUTM2120 Engine Overhaul, Theory, Diagnosis, & Repair	8	
AUTM2136 Heating, Ventilation, and Air Conditioning	3	
AUTM2140 General Automotive	3	
Total		17

#### General Education

Students may select one course from the following:

COML1400	Introduction to Computers	3
ENGL1100	Writing and Research Skills	3
ENGL1102	Technical Written Communications	3
SPEE1020	Interpersonal Communication	3
Total		3
<b>TOTAL Program Requirements</b>		<b>20</b>

#### Brakes, Suspension and Electrical Certificate

Courses	Cr	
AUTM2000 Basic Automotive Electrical/Battery	3	
AUTM2010 Suspension, Steering, & Alignment Systems	4	
AUTM2020 Brakes	4	
AUTM2031 Differential and Four-Wheel Drive	3	
Total		14

#### General Education

Students may select one course from the following:

COML1400	Introduction to Computers	3
ENGL1100	Writing and Research Skills	3
ENGL1102	Technical Written Communications	3
SPEE1020	Interpersonal Communication	3
Total		3
<b>TOTAL Program Requirements</b>		<b>17</b>

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# Biomedical Equipment Technology

Biomedical Equip. Technology A.A.S. Degree . . . . .69 credits  
 Biomedical Equip. Technology Certificate . . . . .26 credits

## Major Description

This program prepares individuals for employment as Biomedical Equipment Technicians (BMETs). Students will learn to maintain life support equipment found in hospitals, medical centers and research laboratories.

## Nature of Work

BMET's inspect, calibrate, maintain and repair diagnostic, monitoring, therapeutic and life-saving equipment. BMETs can find employment with laboratories, hospitals, clinics, equipment manufacturers and contract service providers. BMETs work closely with physicians, dentists, nurses, scientists, technicians and administrators to assure the safe and effective use of sophisticated electronic medical devices..

## Career Opportunities

Minnesota Department of Employment and Economic Development (MDEED) projects a 25 percent increase for medical equipment repairer positions per year in Minnesota from 2000 to 2010. MDEED projects good opportunities for electronic and electrical engineering technician positions available in Minnesota. The average annual salary was \$41,700 for electronic and electrical engineering technicians in Minnesota in the first quarter of 2003.

## Program Delivery

Students can begin general education courses any semester, however, the technical courses begin in the fall semester only. BMET courses are offered evenings and weekends.

## Student Outcomes

1. Graduates of the program will be prepared for employment in the medical equipment repair field.
2. Students will be able to test the performance and operating characteristics of medical electronic/electro-mechanical equipment of moderate complexity to ensure compliance with established performance and safety standards.

3. Students will be able to document the results of equipment safety/performance evaluations.
4. Students will be able to diagnose problems and perform corrective repair work and/or calibration as required on medical electronic/electro-mechanical equipment of moderate complexity.
5. Students will be able to document actions required to correct equipment malfunctions.
6. Students will be able to fabricate from schematic diagrams and layout drawings of new electronic equipment as required.
7. Students will be able to advise equipment operators on the proper use of equipment

## Biomedical Equipment Technology

### A.A.S. Degree

Courses	Cr
BMET1112 DC Electricity	3
BMET1123 AC Electricity	3
BMET1110 Introduction to Biomedical Technology	3
BMET1121 Administrative Functions	3
BMET1221 Instrumentation I	4
BMET1231 Instrumentation II	4
BMET1241 Mechanical Systems	3
BMET2970 Biomedical Equipment Tech. Internship	1
HEAL1101 Anatomy and Physiology	4
HEAL1502 Medical Terminology	2
ITTC1231 Microcomputer System Maintenance	3
SMGT1250 Managing Customer Service	1
BMET1116 Solid State Electronics and Lab	5
BMET1222 Digital I	2
BMET1224 Digital II	2
BMET2141 Microprocessors Applications	3
COMC1859 Introduction to Networking	3
Total	49

### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	20
<b>TOTAL Program Requirements</b>	<b>69</b>

## Biomedical Equip. Technology Certificate

This certificate is designed for those who have completed a degree in Electronics Technology.

Courses	Cr	
BMET1110	Introduction to Biomedical Technology	3
BMET1121	Administrative Functions	3
BMET1221	Instrumentation I	4
BMET1231	Instrumentation II	4
BMET1241	Mechanical Systems	3
BMET2970	Biomedical Equipment Tech. Internship	2
HEAL1101	Anatomy and Physiology	4
HEAL1502	Medical Terminology	2
SMGT1250	Managing Customer Service	1
	Total	26
	<b>TOTAL Program Requirements</b>	<b>26</b>

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## Why DCTC?

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### 94% Job Placement

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### Working with Business

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### Instructors who Live It

Our instructors don't just know this stuff, they live it. Instructors at DCTC have worked extensively in their professions and remain active in the industry. They bring their business and industry experience into their classrooms, shops, labs and studios. And our instructors do more than teach - they advise and mentor students. They make themselves available to students not just for help in coursework, but for help in achieving results, whether that's finding a new job or improving a current one.

### Partners in Education

DCTC has transfer agreements with many colleges and universities. These agreements provide the steps that can help students continue their education toward further certificates, diplomas and degrees. For more information on transfer agreements, visit Career Services.

# Business

Business A.S. Degree .....64 credits

## Major Description

This degree is intended to provide the essential knowledge and skills that can be immediately applied to today's ever-changing and highly competitive business environment. A dual benefit of this degree is the ability to transfer to select four-year institutions to earn a bachelor's degree. Students will complete a common core of business courses, then can choose a career/education path by selecting their business emphasis area from management, human resources management, accounting, marketing, office careers or business entrepreneur. Students must complete general education/liberal arts credits from the Minnesota Transfer Curriculum.

## Career Opportunities

Graduates will be prepared to enter the business field of their career choice.

## Program Delivery

Students can begin this program fall, spring or summer semester. Courses are offered to accommodate a variety of schedules, including days, evenings, weekends and online. Full- and part-time starts are available. For more information, meet with an advisor or counselor before entering this degree program.

## After DCTC

DCTC has pending transfer agreements with many public and private colleges and universities.

## Advanced Standing

Previous college courses, certification, licensure and training may be considered for credit in the major. The responsibility for seeking credit rests with the student and can be initiated by completing the course SMGT2950 Prior Experiential Learning Portfolio Development (1 elective credit).

## Student Outcomes

1. Students will learn and apply general knowledge and skills necessary to be familiar with current business practices.
2. Students will have knowledge of accounting principles.
3. Students will have general knowledge of marketing principles.
4. Students will learn and apply skills within their chosen emphasis area..
5. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Business A.S. Degree

(Pending MnSCU Board approval)

Courses	Cr
ACCT1000 Principles of Accounting I	4
ACCT1003 Principles of Accounting II	4
MKTC1000 Principles of Marketing	3
SMGT1033 Business Law and Ethics	3
SMGT2046 Fundamentals of Management and Diversity	4
Total	18

## Technical Emphasis

Students must select one of the following six concentration areas below (\*) to complete their technical emphasis

### \* Business Accounting

ACCT1206 Payroll Accounting	2
ACCT1306 Spreadsheets	3
ACCT1406 Income Tax	4
ACCT2100 Cost Accounting I	4
ACCT2200 Accounting Computer Applications I	3
Total	16

### \* Business Entrepreneur

ENTR1150 The Successful Entrepreneur	2
ENTR1430 Marketing Strategies for a Small Business	2
ENTR1650 Selling Success for the Entrepreneur	3
ENTR1860 Business Plan Development	3
ENTR1900 Capitalizing a Small Business	2
OFFC1240 Quick Books or SMGT1601 Financial Mgmt.	2
SMGT1060 Habits for Personal Effectiveness	1
SMGT1250 Managing Customer Service	1
Total	16



**\* Human Resources Management**

SMGT1231	Planning and Project Management	2
SMGT1242	Effective Business Communication	3
SMGT1405	Managing Performance	3
SMGT1441	Intro to Human Resources Management	3
SMGT1470	Safety and Compliance Management	2
SMGT1875	Training and Developing Employees	3
Total		16

**\* Management**

SMGT1205	Total Quality Management	4
SMGT1260	Managing Teams	3
SMGT2001	Management Skills I, Foundations of Mgmt.	3
SMGT2002	Management Skills II, Plan & Organize	3
SMGT2003	Management Skills III, Lead & Control	3
Total		16

**\* Marketing**

MKTC1100	Fundamentals of Sales	3
MKTC1150	Consumer and Professional Buying Behavior	3
MKTC2000	Advertising Practices and Procedures	3
MKTC2060	Proposal Writing	1
MKTC2215	Marketing Promotion	2
MKTC2410	Marketing Visual Communications	1
MKTC2600	Marketing Research	3
Total		16

**\* Meeting and Event Management**

SMGT1160	Fund. of Meeting, Conference, and Event Mgmt.	2
SMGT1161	Adv. Meeting, Conference, and Event Mgmt.	3
SMGT1162	Special Event Coordination and Mgmt.	3
SMGT1163	Event Promotion	3
SMGT1164	Meeting and Event Risk Management	2
SMGT1167	Meeting and Event Sponsorship	3
Total		16

**\* Office Careers**

OFFC1010	Business English Skills	2
OFFC1017	Technology for the Business Professional	3
OFFC1020	Office Procedures	4
OFFC1040	Integrated Office Skills	3
OFFC1285	Oral Business Comm./Job Seeking Skills	2
OFFC1290	Written Business Communication	2
Total		16

**\* Travel and Tourism**

TRVL1011	Travel Technology	5
TRVL1020	Travel Geography	3
TRVL1035	Travel and Tourism Products and Services	5
TRVL1056	Sales, Marketing, and Professional Development	3
Total		16

**General Education**

The following courses are required:

COML1400	Introduction to Computers	3
ENGL1100	Writing and Research Skills	3
SPEE1020	Interpersonal Communications	3
Total		9

**General Education Electives**

Math	(Goal 4)	3-4
Science	(Goal 3)	3-4
Electives	(Goal 2, 5, 6, 8, 9, or 10)	13-15
Total		21

**TOTAL Program Requirements 64**

For more information contact Scott Gunderson at 651-423-8295 or email [scott.gunderson@dctc.edu](mailto:scott.gunderson@dctc.edu).

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# Business Entrepreneur

Business Entrepreneur Certificate . . . . .18 credits

## Major Description

This program combines small business management studies with an in-depth analysis of ways new business ventures are created, designed, developed and operated. The central core of this program is to study the processes and procedures needed to transform an initial entrepreneurial idea into a viable business operation. The program is further designed to act as a stand-alone certificate for individuals with existing skills and as a complementary certificate for a variety of existing technical programs. Individuals can apply the 18 credits earned toward the Supervisory Management A.A.S. Degree.

## Nature of Work

The Business Entrepreneur program is recommended for individuals who are planning to work in a small business or who are thinking of starting and operating their own business.

## Career Opportunities

Students will learn skills that will enable them to be more valuable as employees in the career of their choice or will be able to apply these skills towards building a successful business of their own. The course content is designed to develop the business skills needed for the individual who wants to be self-employed.

## Program Delivery

Students can begin this program fall or spring semester. Courses are offered primarily in the late afternoon or evening. Full- or part-time starts are available. Courses in this program are offered at DCTC's Apple Valley site.

## Student Outcomes

1. Students will be able to profile their individual skills and preferences related to five dimensions of being a successful entrepreneur.
2. Students will learn the principles and methods used in keeping track of prospects, clients, and customers. They will also develop a detailed business plan.
3. Students will become familiar with contract law, business law and business ethics, bookkeeping and record keeping. Students will enhance their understanding and people skills, develop a philosophy for success, learn to negotiate for agreement and develop written, visual, and oral communication and presentation skills.

## Business Entrepreneur Certificate

Courses		Cr
ENTR1150	The Successful Entrepreneur	2
ENTR1430	Marketing Strategies for Small Business	2
ENTR1650	Selling Success for the Entrepreneur	3
ENTR1860	Business Plan Development	3
ENTR1900	Capitalizing a Small Business	2
OFFC1240	Quick Books I (or SMGT1601 Financial Mgmt.)	2
SMGT1033	Business Law and Ethics	3
SMGT1250	Managing Customer Service	1
Total		18
<b>TOTAL Program Requirements</b>		<b>18</b>

To learn more about the Business Entrepreneur Program contact Bob Voss at 651-423-8356 or email robert.voss@dctc.edu.

## 6 Steps to a Successful Start

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# Child Development

Child Development A.S. Degree . . . . .	63 credits
Child Development A.A.S. Degree . . . . .	65 credits
Child Development Diploma . . . . .	33 credits
Child Development Certificate . . . . .	17 credits

## Major Description

The Child Development program is designed to prepare individuals for employment in a variety of early childhood settings. Courses are designed to meet Minnesota Department of Human Services educational requirements for assistant teachers and teachers in a child care setting. Throughout the program, students will learn about child development, guidance, professional relationships, nutrition, health and safety, cultural sensitivity and techniques for promoting learning in young children.

Each level provides either lab, internship or practicum opportunities that allow students to apply their skills and knowledge in a practical experience.

The Child Development Program at DCTC is a participant in E-LECT. Through E-LECT (e-learning for early childhood teachers) we are able to offer high quality credit-based child development courses, certificate, diploma and A.A.S./A.S. degree online.

Our program also meets Associates in Applied Science/A.S. Degree requirements for school district paraprofessionals and Head Start mandates. Students with an A.A.S./A.S. Degree can transfer to University of Wisconsin – Stout or Concordia University to complete their Pre-K-Primary teaching degree or transfer to Metropolitan State University to complete a B.A. in Psychology.

## Nature of Work

Students completing the Child Development program will be able to work with infants, toddlers, preschoolers, school-aged children, children with special needs and parents of young children in homes, centers and community-based programs. Other career options could be in child advocacy or social service agencies.

## Career Opportunities

Depending on the level of training and experience, a student may find employment as a child care assistant teacher or teacher, child care center director, family child care provider, nanny, home visitor, child care resource and referral counselor, special education program assistant or child advocate.

## Program Delivery

Students can begin this program fall or spring semester. Day, evening, weekend and online courses are offered. Full- or part-time starts are available.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Metropolitan State University and University of Wisconsin – Stout. We also work with Concordia University in St. Paul. See Career Services for more information.

## Program Prerequisites

No prior record involving child maltreatment or any crime of violence.

## Student Outcomes

1. Students completing the Child Development programs will be prepared for employment as qualified child care providers.
2. Students will be able to demonstrate basic caregiving skills.
3. Students will have the ability and knowledge to access community and family resources and systems that impact children's/families' lives.
4. Students will have knowledge of a variety of early childhood curriculum models.
5. Students will have hands-on training in a variety of childcare settings.
6. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Child Development A.S. Degree

Courses	Cr
CDEV1200 Prof. Relations in Early Childhood Careers	3
CDEV1210 Foundations of Child Development I	3
CDEV1220 Child Safety, Health, and Nutrition	4
CDEV1230 Guidance and the Early Childhood Env.	4
CDEV1320 Foundations of Child Development II	4
CDEV1340 Planning and Implementing Curriculum	3
CDEV1510 Internship	3
CDEV2320 Profiles of the Exceptional Child	3
CDEV2600 Professional Leadership	3
<b>Total</b>	<b>30</b>

### Technical Electives

Students may select as an elective any course listed in the Child Development curriculum with the approval of the advisor. Students transferring to other colleges need to talk to advisor about recommended elective courses.

<b>Total</b>	<b>3</b>
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### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

<b>Total</b>	<b>30</b>
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<b>TOTAL Program Requirements</b>	<b>63</b>
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## Child Development A.A.S. Degree

Courses	Cr
CDEV1200 Prof. Relations in Early Childhood Careers	3
CDEV1210 Foundations of Child Development I	3
CDEV1220 Child Safety, Health, and Nutrition	4
CDEV1230 Guidance and the Early Childhood Env.	4
CDEV1320 Foundations of Child Development II	4
CDEV1340 Planning and Implementing Curriculum	3
CDEV1510 Internship	3
CDEV2320 Profiles of the Exceptional Child	3
CDEV2330 Advanced Child Guidance	3
CDEV2600 Professional Leadership	3
CDEV2640 Program Planning	3
CDEV2840 Practicum	3
<b>Total</b>	<b>39</b>

### Technical Electives

Students may select as an elective any course listed in the Child Development curriculum with the approval of the advisor.

<b>Total</b>	<b>6</b>
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### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

<b>Total</b>	<b>20</b>
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<b>TOTAL Program Requirements</b>	<b>65</b>
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## Child Development Diploma

Courses	Cr
CDEV1200 Prof. Relations in Early Childhood Careers	3
CDEV1210 Foundations of Child Development I	3
CDEV1220 Child Safety, Health, and Nutrition	4
CDEV1230 Guidance and the Early Childhood Env.	4

CDEV1320 Foundations of Child Development II	4
CDEV1340 Planning and Implementing Curriculum	3
CDEV1510 Internship	3
<b>Total</b>	<b>24</b>

### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

<b>Total</b>	<b>9</b>
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<b>TOTAL Program Requirements</b>	<b>33</b>
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## Child Development Certificate

Courses	Cr
CDEV1200 Prof. Relations in Early Childhood Careers	3
CDEV1210 Foundations of Child Development I	3
CDEV1220 Child Safety, Health, and Nutrition	4
CDEV1230 Guidance and the Early Childhood Env.	4
<b>Total</b>	<b>14</b>

### General Education

The following course is required:

ENGL1100 Writing and Research Skills	3
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<b>Total</b>	<b>3</b>
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<b>TOTAL Program Requirements</b>	<b>17</b>
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# Computer Networking

Computer Networking A.A.S. Degree . . . . .	72 credits
Computer Networking Diploma . . . . .	64 credits
Network Support Services Certificate . . . . .	18 credits

## Major Description

This major prepares students to work with installation and use of computers in various network environments. Students learn the skills and knowledge required to support personal computers in a network and stand-alone environment. In learning how computers are used in the network arena, students will build networks, troubleshoot microcomputer problems, install software and manage networks.

## Nature of Work

Skilled graduates will provide networking solutions for employers. Some common activities will include network planning, installation, administration and maintenance.

## Career Opportunities

Graduates may obtain employment in entry-level positions such as network installation, network management, computer technician, help desk and network maintenance.

## Program Delivery

Students can begin this program fall or spring semester. Courses are offered days and evenings as well as some online-enhanced classes. Full- or part-time starts are available

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Southwest State University, the University of Minnesota–Crookston, Cardinal Stritch and Saint Mary’s University. See Career Services for more information.

## Student Outcomes

1. Graduates will be prepared for employment in the computer industry.
2. Students will have hands-on experiences through realistic projects and simulations.
3. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Computer Networking A.A.S. Degree

Courses	Cr
COMC1581 Researching with the Internet	2
COMC1811 Programming Fundamentals	3
COMC1859 Introduction to Networking	3
COMC1904 Advanced Communications	3
COMC1950 Database Essentials	2
COMC1979 Linux Server	3
COMC1980 Network Interoperability	3
COMC1981 UNIX Operating System	3
COMC1982 Network Security	3
COMC1983 Electronic Messaging	3
COMC1987 Command Line Administration	3
COMC1990 Workstation Administration	3
COMC2000 Windows Servers	3
COMC2003 Directory Services	3
COMC2100 Wireless Networking	3
ITTC1231 Microcomputer System Maintenance	3
ITTC2231 Networking Technology I	3
<b>Total</b>	<b>49</b>

### Technical Elective

Students may select as an elective any course listed in the Computer Careers curriculum or other courses with advisor approval.

<b>Total</b>	<b>3</b>
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### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

<b>Total</b>	<b>20</b>
<b>TOTAL Program Requirements</b>	<b>72</b>

## Computer Networking Diploma

Courses	Cr
COMC1581 Researching with the Internet	2
COMC1811 Programming Fundamentals	3
COMC1859 Introduction to Networking	3
COMC1904 Advanced Communications	3
COMC1950 Database Essentials	2
COMC1979 Linux Server	3
COMC1980 Network Interoperability	3
COMC1981 UNIX Operating System	3
COMC1982 Network Security	3
COMC1983 Electronic Messaging	3
COMC1987 Command Line Administration	3
COMC1990 Workstation Administration	3
COMC2000 Windows Servers	3
COMC2003 Directory Services	3
COMC2100 Wireless Networking	3
ITTC1231 Microcomputer System Maintenance	3
ITTC2231 Networking Technology I	3
<b>Total</b>	<b>49</b>

### Technical Elective

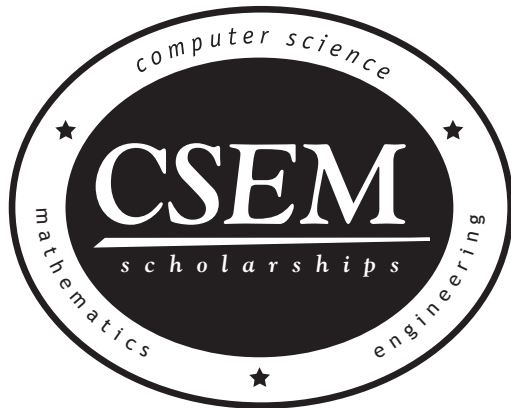
Students may select as an elective any course listed in the Computer Careers curriculum or other courses with advisor approval.

Total	6
<b>The following courses are required:</b>	
COML1400 Introduction to Computers	3
ENGL1100 Writing and Research Skills	3
SPEE1020 Interpersonal Communication	3
Total	9
<b>TOTAL Program Requirements</b>	<b>64</b>

### Network Support Services Certificate

*Offered at the IT Training Center in Eagan - special tuition rates have been approved.*

Courses	Cr
COMC1877 Network+	2
COMC1971 A+	4
COMC1991 Microsoft Windows OS Install/Admin	1
COMC1992 Microsoft Server Management	2
COMC1993 Microsoft Network Infrastructure Implementation	2
COMC1994 Microsoft Network Infrastructure Planning	2
COMC1995 Microsoft Active Directory	2
COMC1996 Microsoft Network Security	1
COMC1997 Microsoft Mail Server Management	2
Total	18
<b>TOTAL Program Requirements</b>	<b>18</b>



### Scholarships

CSEM (Computer Science, Engineering, and Mathematics) is a scholarship program funded by the National Science Foundation.\* Students enrolling in the Computer Networking program may be eligible to receive up to \$3,125 per year to help defray the cost of education and living expenses!

For more information on the CSEM scholarship program, or to see if you qualify, contact Financial Aid at 651-423-8299.



*\*This material is based upon work supported by the National Science Foundation under Grant No. 0324062 [for the CSEMS grant]*

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# Computer Programming

Computer Programming A.A.S. Degree . . . . .72 credits  
 Computer Programming Diploma . . . . .64 credits

## Major Description

The Computer Programming major prepares students to become computer programmers. Students learn various programming languages used for software development. Students learn to design, write, debug and test application software. Both individual and team efforts are developed.

## Nature of Work

Skilled graduates in Computer Programming will be prepared to provide software solutions for employers. Programmers convert data from project specifications and statements of problems to develop computer programs. In addition, programmers code, test, maintain and support software systems. Programmers are often asked to provide solutions as a part of a team and rely on strong analytical skills.

## Career Opportunities

Graduates may obtain employment in entry-level positions such as computer programmer, applications programmer, programmer/operator, software test and help desk support.

## Program Delivery

Students can begin this program fall or spring semester. Courses are offered days and evenings as well as some online-enhanced classes. Full- or part-time starts are available.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Southwest State University, the University of Minnesota–Crookston, Cardinal Stritch and Saint Mary’s University. See Career Services for more information.

## Student Outcomes

1. Graduates of the Computer Programming program will be prepared for employment in the computer industry.
2. Students will be able to design and code software written in Visual Basic, C++, and Java.
3. Students will have hands-on experiences through realistic projects and simulations.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Computer Programming A.A.S. Degree

Courses	Cr
COMC1557 Visual Basic Programming	3
COMC1560 Advanced Visual Basic Programming	3
COMC1571 C++ Programming	3
COMC1581 Researching with the Internet	2
COMC1811 Programming Fundamentals	3
COMC1859 Introduction to Networking	3
COMC1950 Database Essentials	2
COMC1987 Command Line Administration	3
COMC1990 Workstation Administration	3
COMC2006 Database Design	3
COMC2008 Principles of Object Oriented Design	3
COMC2010 Java I	3
COMC2012 Java II	3
COMC2014 Application Development	3
ITTC1231 Microcomputer System Maintenance	3
Total	43

## Technical Elective

Students may select as an elective any course listed in the Computer Careers curriculum or other courses with advisor approval.

Total	9
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## General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	20
<b>TOTAL Program Requirements</b>	<b>72</b>

## Computer Programming Diploma

Courses	Cr
COMC1557 Visual Basic Programming	3
COMC1560 Advanced Visual Basic Programming	3
COMC1571 C++ Programming	3
COMC1581 Researching with the Internet	2
COMC1811 Programming Fundamentals	3
COMC1859 Introduction to Networking	3
COMC1987 Command Line Administration	3
COMC1990 Workstation Administration	3
COMC1950 Database Essentials	2
COMC2006 Database Design	3
COMC2008 Principles of Object Oriented Design	3
COMC2010 Java I	3
COMC2012 Java II	3
COMC2014 Application Development	3
ITTC1231 Microcomputer System Maintenance	3
<b>Total</b>	<b>43</b>

## Technical Elective

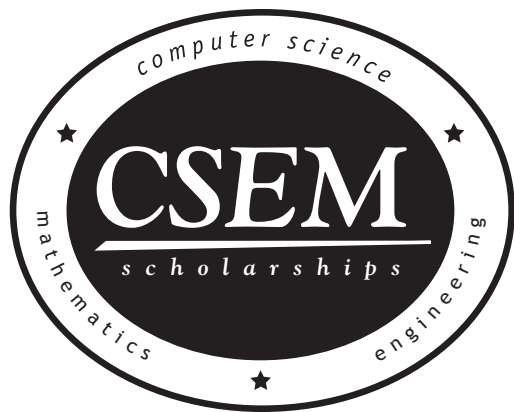
Students may select as an elective any course listed in the Computer Careers curriculum or other courses with advisor approval.

Total	12
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## General Education

The following courses are required:

COML1400 Introduction to Computers	3
ENGL1100 Writing and Research Skills	3
SPEE1020 Interpersonal Communication	3
<b>Total</b>	<b>9</b>
<b>TOTAL Program Requirements</b>	<b>64</b>



## Scholarships

CSEM (Computer Science, Engineering, and Mathematics) is a scholarship program funded by the National Science Foundation.\* Students enrolling in the Computer Programming program may be eligible to receive up to \$3,125 per year to help defray the cost of education and living expenses!

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# Concrete and Masonry

Concrete and Masonry A.A.S. Degree .....67 credits  
 Concrete and Masonry Diploma .....33 credits

## Major Description

The Concrete and Masonry program prepares individuals for careers such as a concrete mason, concrete finisher, or block mason in both residential and commercial construction. Students will learn fundamental construction skills as well as study properties and testing of concrete, concrete repair, specialty concrete properties, concrete production facilities operation, and concrete construction methods.

## Nature of Work

Cement masons, concrete finishers, and brick and block workers all work with concrete, one of the most common and durable materials used in construction. Once set, concrete – a mixture of Portland cement, sand, gravel, and water – becomes the foundation for everything from decorative patios and floors to huge dams or miles of roadways. Like many other construction trades workers, layoffs may occur during downturns in construction activity.

## Career Opportunities

Employment opportunities are excellent. Graduates may be employed by residential or commercial contractors as bricklayers or cement masons. After additional experiences, graduates may work in other related positions such as foreman, tile setter, and stonemason. Business ownership is also a possibility.

## Program Delivery

Students can begin this program in the fall semester only. Courses are offered during the day. A full-time start is preferred.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Southwest State University and Saint Mary's University. See Career Services for more information.

## Student Outcomes

1. Graduates will be prepared for employment in the concrete masonry field.
2. Graduates will be able to use and operate related industry equipment.
3. Graduates will be able to diagnose and resolve problems in fresh and hard concrete.
4. Graduates will understand regulations and building codes as pertaining to residential and commercial practices.
5. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Concrete and Masonry A.A.S. Degree

Courses	Cr
CONC1600 Shop Theory	2
CONC1601 Shop I: Site Preparation for Construction	6
CONC1602 Shop II: Brick and Block Construction	4
CONC1604 Foundations, Concrete, & Safety for Masons	4
CONC1605 Math for Masons	2
CONC1606 Testing of Mortar and Concrete	3
CONC1610 Concrete Problems: Diagnosis, Prevention, & Resolution	2
CONC1613 Shop III: Adv. Brick & Block Construction	4
CONC1614 Shop IV: Integrated Concrete Systems	4
CONC1615 Blueprint Reading Estimating	2
ENTR1300 Business Law/Ethics for the Entrepreneur	1
ENTR1800 Business Plan Development	2
OFFC1240 Quick Books I	2
SMGT1000 Principles of Supervision	3
SMGT1028 Management Effectiveness	3
Total	44

## Technical Electives

Students may select their elective credits from courses in Supervisory Management (SMGT) or Business Entrepreneur (ENR) curriculums with the approval of the advisor.

Total	3
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## General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	20
<b>TOTAL Program Requirements</b>	<b>67</b>

## Concrete and Masonry Diploma

Courses	Cr
CONC1600 Shop Theory	2
CONC1601 Shop I: Site Preparation for Construction	6
CONC1602 Shop II: Brick and Block Construction	4
CONC1604 Foundations, Concrete, & Safety for Masons	4
CONC1605 Math for Masons	2
CONC1606 Testing of Mortar and Concrete	3
CONC1610 Concrete Problems: Diagnosis, Prevention, & Resolution	2
CONC1613 Shop III: Adv. Brick & Block Construction	4
CONC1614 Shop IV: Integrated Concrete Systems	4
CONC1615 Blueprint Reading Estimating	2
Total	33
<b>TOTAL Program Requirements</b>	<b>33</b>

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## Why DCTC?

Besides our programs and focus on technology, there are plenty of other great reasons for attending DCTC.

### 93% Job Placement

Year after year, we place more than 93% of our graduates in their field within six months of graduation. And as always, we offer life-time placement assistance to graduates.

### Working with Business

At DCTC, you'll find examples where our partnerships with local, state and national businesses benefit our students. Thanks to the work of our program advisory committees, we maintain active partnerships with more than 500 businesses and industries to ensure that students are receiving the skills employers are seeking, using the latest technology possible.

### Instructors who Live It

Our instructors don't just know this stuff, they live it. Instructors at DCTC have worked extensively in their professions and remain active in the industry. They bring their business and industry experience into their classrooms, shops, labs and studios. And our instructors do more than teach - they advise and mentor students. They make themselves available to students not just for help in coursework, but for help in achieving results, whether that's finding a new job or improving a current one.

### Partners in Education

DCTC has transfer agreements with many colleges and universities. These agreements provide the steps that can help students continue their education toward further certificates, diplomas and degrees. For more information on transfer agreements, visit Career Services.

# Database Administration

Database Administration A.A.S. Degree . . . . .72 credits  
 Database Administration Diploma . . . . .64 credits

## Major Description

The Database Administration major prepares students to become database administrators. Students learn several database management systems (Oracle and SQL Server), as well as database theory and applications.

## Nature of Work

Database administrators administer and control an organization's data resources. Businesses of all sizes and types need individuals trained in creating, using, managing, and maintaining databases. Database administrators may design, modify, install, configure, monitor, tune and troubleshoot database systems. They deal with storage management issues to backup and recover data, security issues to ensure authorized access to data and performance issues to increase speed and reliability of database systems.

## Career Opportunities

Skilled graduates of this program can expect entry-level employment in the database field.

## Program Delivery

Students can begin this program fall or spring semester. Courses are offered days and evenings as well as some online-enhanced classes. Full- or part-time starts are available.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Southwest State University, the University of Minnesota—Crookston, Cardinal Stritch and Saint Mary's University. See Career Services for more information.

## Student Outcomes

1. Graduates of the Database Administration program will be prepared for employment in the computer industry.
2. Students will have hands-on experiences through realistic projects and simulations.
3. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Database Administration A.A.S. Degree

Courses	Cr
COMC1581 Researching with the Internet	2
COMC1811 Programming Fundamentals	3
COMC1859 Introduction to Networking	3
COMC1981 UNIX Operating System	3
COMC1987 Command Line Administration	3
COMC1990 Workstation Administration	3
COMC1950 Database Essentials	2
COMC2000 Windows Servers	3
COMC2006 Database Design	3
COMC2008 Principles of Object Oriented Design	3
COMC2010 Java I	3
COMC2014 Application Development	3
COMC2016 Oracle I	3
COMC2018 Oracle II	3
COMC2024 MS SQL Server I	3
COMC2026 MS SQL Server II	3
ITTC1231 Microcomputer System Maintenance	3
Total	49

## Technical Elective

Students may select as an elective any course listed in the Computer Careers curriculum or other courses with advisor approval.

Total	3
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## General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	20
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<b>TOTAL Program Requirements</b>	<b>72</b>
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## Database Administration Diploma

Courses	Cr
COMC1581 Researching with the Internet	2
COMC1811 Programming Fundamentals	3
COMC1950 Database Essentials	2
COMC1859 Introduction to Networking	3
COMC1981 UNIX Operating System	3
COMC1987 Command Line Administration	3
COMC1990 Workstation Administration	3
COMC2000 Windows Servers	3
COMC2006 Database Design	3
COMC2008 Principles of Object Oriented Design	3
COMC2010 Java I	3
COMC2014 Application Development	3
COMC2016 Oracle I	3
COMC2018 Oracle II	3
COMC2024 MS SQL Server I	3
COMC2026 MS SQL Server II	3
ITTC1231 Microcomputer System Maintenance	3
<b>Total</b>	<b>49</b>

## Technical Elective

Students may select as an elective any course listed in the Computer Careers curriculum or other courses with advisor approval.

Total	6
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## General Education

The following courses are required:

COML1400 Introduction to Computers	3
ENGL1100 Writing and Research Skills	3
SPEE1020 Interpersonal Communication	3

Total	9
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<b>TOTAL Program Requirements</b>	<b>64</b>
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## Scholarships

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# Dental Assistant

Dental Assistant A.A.S. Degree .....64 credits  
 Dental Assistant Diploma .....44 credits

## Major Description

The Dental Assistant program is accredited by the Commission on Dental Accreditation. It prepares students for employment in dentistry. Students study ways to control/prevent dental disease, as well as ways to teach patients preventive care. Students are trained to expose/process dental X-rays and perform chairside skills and expanded functions. Learning is accomplished in on-campus classrooms and labs, and dental clinics in the metro area. Graduates are eligible to write the Dental Assisting National Board Certification exam and the Minnesota Registration exam.

## Nature of Work

Dental Assistants provide direct patient care working under the direction of a dentist. Potential employers include dentists in both general and specialty offices.

## Career Opportunities

Employment and career opportunities may be developed in government and private dental offices. Advancement within a work setting may occur with experience. Graduates may choose to pursue a dental hygiene license.

## Program Delivery

Students can begin this program in the fall semester only. Courses are offered during the day. A full-time start is preferred.

## Professional Organizations

The American Dental Assistants Association and the Minnesota Dental Assistants Association offer memberships at a minimal cost for students. Continued membership after graduation provides the graduate with professional contacts, opportunities for learning and a chance to participate in local and national governance of professional associations.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Southwest State University and Saint Mary's University. See Career Services for more information.

## Admissions Requirements

Students applying to this program must meet the requirements identified on the Admissions Checklist. Students must have a high school diploma or GED to be accepted into the program as required by the American Dental Association (the program's accrediting body).

## Student Outcomes

1. Graduates of this program will be prepared for immediate employment in the dental assisting field.
2. Graduates will be able to successfully take/pass the National Certification Exam and the State Registration Exam.
3. Graduates will be experienced in dental office protocol via externship.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Dental Assistant A.A.S. Degree

Courses	Cr
DENT1100 Dental Science	4
DENT1110 Pre-Clinical Dental Assisting	3
DENT1120 Dental Health	2
DENT1130 Chairside Assisting I	3
DENT1140 Dental Materials	3
DENT1250 Radiology	5
DENT1260 Expanded Functions	5
DENT1270 Chairside Assisting II	3
DENT1280 Dental Practice Management	2
DENT2970 Externship	8
Total	38

## General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	26
<b>TOTAL Program Requirements</b>	<b>64</b>

## Dental Assistant Diploma

Courses	Cr
DENT1100 Dental Science	4
DENT1110 Pre-Clinical Dental Assisting	3
DENT1120 Dental Health	2
DENT1130 Chairside Assisting I	3
DENT1140 Dental Materials	3
DENT1250 Radiology	5
DENT1260 Expanded Functions	5
DENT1270 Chairside Assisting II	3
DENT1280 Dental Practice Management	2
DENT2970 Externship	8
Total	38

## General Education

The following courses are required:

COML1400 Introduction to Computers	3
SPEE1020 Interpersonal Communication	3
Total	6
<b>TOTAL Program Requirements</b>	<b>44</b>

## 6 Steps to a Successful Start

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Year after year, we place more than 94% of our graduates in their field within six months of graduation. And as always, we offer life-time placement assistance to graduates.

### Working with Business

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### Instructors who Live It

Our instructors don't just know this stuff, they live it. Instructors at DCTC have worked extensively in their professions and remain active in the industry. They bring their business and industry experience into their classrooms, shops, labs and studios. And our instructors do more than teach - they advise and mentor students. They make themselves available to students not just for help in coursework, but for help in achieving results, whether that's finding a new job or improving a current one.

### Partners in Education

DCTC has transfer agreements with many colleges and universities. These agreements provide the steps that can help students continue their education toward further certificates, diplomas and degrees. For more information on transfer agreements, visit Career Services.

# Electrical Construction & Maintenance Technology

Electrical Construction & Maintenance Technology A.A.S. Degree .....83 credits  
 Electrical Construction & Maintenance Technology Diploma .....72 credits

## Major Description

This program is designed to give students hands-on-experience for entrance into numerous electrical construction, installation, operation and maintenance occupations. The program consists of technical courses in electrical/electronics theory, installation, maintenance and testing of electrical apparatus and wiring. Additional courses cover installation and testing of electrical/electronic control devices and the application of the National Electric Code.

## Nature of Work

Electricians need to be in good physical health, be able to lift, distinguish colors, work from ladders, enjoy working indoors and out, and be safety conscious.

## Career Opportunities

Graduates may be employed by electrical contractors, private companies/plants and manufacturers of electrical equipment. Other positions in the electrical field include inspectors, contractors, estimators and repair persons. Business ownership is also a possibility for graduates.

## Program Delivery

Students can begin this program fall or spring semester. Courses are offered during the day. A full-time start is preferred.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Southwest State University and Saint Mary's University. See Career Services for more information.

## Student Outcomes

1. Graduates of this program will be prepared for apprenticeship in the electrical field.
2. Graduates will have knowledge of the National Electrical Code, enabling them to understand the application of the NEC to install electrical services legally and safely.
3. Graduates will have the ability to apply electrical/electronic theory to practical applications.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Electrical Construction and Maintenance Technology A.A.S. Degree

Courses		Cr
ELEC1110	D. C. Electricity Theory and Lab	3
ELEC1120	A. C. Electricity Theory and Lab	3
ELEC1130	National Electrical Code I	3
ELEC1140	Blueprint Reading for Technicians	3
ELEC1210	Analog/ Digital Electronics Theory	2
ELEC1220	Analog/ Digital Electronics Lab	4
ELEC1230	Construction Skills & Intro to Wiring Theory	3
ELEC1240	Construction Skills & Intro to Wiring Lab	6
ELEC2110	Electrical Apparatus Theory	3
ELEC2120	Electrical Apparatus Lab	6
ELEC2131	Programmable Logic Controllers Theory	2
ELEC2141	Programmable Logic Controllers Lab	4
ELEC2210	National Electrical Code II	3
ELEC2220	Electrical/Electronic Controls & Systems Theory	2
ELEC2230	Electrical/Electronic Controls & Systems Lab	4
ELEC2240	Adv. Construction Skills & Industrial Maintenance Tech	3
ELEC2250	Advanced Construction Skills & Industrial Maintenance Tech Lab	6
MATS1205	Math for Electricians	3
Total		63

## General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	20
<b>TOTAL Program Requirements</b>	<b>83</b>

## Electrical Construction and Maintenance Technology Diploma

Courses		Cr
ELEC1110	D. C. Electricity Theory and Lab	3
ELEC1120	A. C. Electricity Theory and Lab	3
ELEC1130	National Electrical Code I	3
ELEC1140	Blueprint Reading for Technicians	3
ELEC1210	Analog/ Digital Electronics Theory	2
ELEC1220	Analog/ Digital Electronics Lab	4
ELEC1230	Construction Skills & Intro to Wiring Theory	3
ELEC1240	Construction Skills & Intro to Wiring Lab	6
ELEC2110	Electrical Apparatus Theory	3
ELEC2120	Electrical Apparatus Lab	6
ELEC2131	Programmable Logic Controllers Theory	2
ELEC2141	Programmable Logic Controllers Lab	4

ELEC2210	National Electrical Code II	3
ELEC2220	Electrical/Electronic Controls & Systems Theory	2
ELEC2230	Electrical/Electronic Controls & Systems Lab	4
ELEC2240	Adv. Construction Skills & Industrial Maintenance Tech	3
ELEC2250	Advanced Construction Skills & Industrial Maintenance Tech Lab	6
MATS1205	Math for Electricians	3
Total		63

### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total		9
<b>TOTAL Program Requirements</b>		<b>72</b>

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### Instructors who Live It

Our instructors don't just know this stuff, they live it. Instructors at DCTC have worked extensively in their professions and remain active in the industry. They bring their business and industry experience into their classrooms, shops, labs and studios. And our instructors do more than teach - they advise and mentor students. They make themselves available to students not just for help in coursework, but for help in achieving results, whether that's finding a new job or improving a current one.

### Partners in Education

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# Electrical Lineworker

Electrical Lineworker A.A.S. Degree . . . . .60 credits  
 Electrical Lineworker Diploma . . . . .43 credits

## Major Description

Student will prepare to join the work force, as a safe and knowledgeable apprentice ready to serve the electrical power industry. Students are given extensive hands-on experience building power lines. Both overhead and underground techniques are presented and practiced. The instruction involves classroom and outdoor hands-on activities related to overhead and underground lines. Campus facilities for instruction include a large outdoor training field that features pole climbing, line construction, bucket-truck operations and the use of powerline construction trucks for erecting power lines. Related overhead line work and operation of underground equipment is also involved

## Nature of Work

Electrical lineworkers spend most of their time outdoors building overhead power lines and/or laying underground cable. Skilled workers maintain these cables, which includes making proper connections and installing transformers and related equipment. The use and care of tools is an essential part of the worker's duties. Safety is of prime importance in this occupation. Electrical lineworkers must be able to lift 50 lbs. and perform strenuous physical duties. They must also respond creatively to business challenges, have strong communication skills and an attitude of success through teamwork.

## Career Opportunities

Employment opportunities are available in investor- or consumer-owned power companies, in municipal electric companies and with electrical contractors. Graduates usually enter the field as first- or second-step apprentices and qualify for rapid advancement. Job placement is excellent, especially if graduates are willing to relocate.

## Program Delivery

Students can begin this program in July only. Courses are offered during the day. A full-time start is preferred.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Bemidji State University, Southwest State University and Saint Mary's University. See Career Services for more information.

## Program Prerequisites

Introduction to Climbing (ELLW0098), a one-credit course, should be taken prior to entry in the Electrical Lineworker major, unless the student has instructor approval for previous climbing experience.

## Student Outcomes

1. Graduates of this program will be prepared for employment as apprentice electrical lineworkers.
2. Students will know safety measures for the job.
3. Students will know how to communicate clearly and comprehend directions on the job.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Electrical Lineworker A.A.S. Degree

Courses	Cr
ELLW1110 Distribution I	4
ELLW1120 Utility Equipment and Tools	2
ELLW1130 Basic Electricity	2
ELLW1140 Distribution IIA	4
ELLW1141 Distribution IIB	4
ELLW1150 Construction Planning and Practices	2
ELLW1160 Transformers I	4
ELLW1162 Transformers II	4
ELLW1170 Line Construction and Maintenance A	4
ELLW1172 Line Construction and Maintenance B	4
ELLW1180 Underground Cable and Fault Locating	2
ELLW1185 Electrical Industry Search Skills	1
HEAL1030 Emergency Care Technical Trades	3
Total	40

## General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	20
<b>TOTAL Program Requirements</b>	<b>60</b>

## Electrical Lineworker Diploma

Courses	Cr	
ELLW1110	Distribution I	4
ELLW1120	Utility Equipment and Tools	2
ELLW1130	Basic Electricity	2
ELLW1140	Distribution IIA	4
ELLW1141	Distribution IIB	4
ELLW1150	Construction Planning and Practices	2
ELLW1160	Transformers I	4
ELLW1162	Transformers II	4
ELLW1170	Line Construction and Maintenance A	4
ELLW1172	Line Construction and Maintenance B	4
ELLW1180	Underground Cable and Fault Locating	2
ELLW1185	Electrical Industry Search Skills	1
HEAL1030	Emergency Care Technical Trades	3
Total		40

## General Education

Students may select one course from the following:

COML1400	Introduction to Computers	3
ENGL1100	Writing and Research Skills	3
ENGL1102	Technical Written Communications	3
SPEE1020	Interpersonal Communication	3
Total		3
<b>TOTAL Program Requirements</b>		<b>43</b>

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# *Executive Assistant*

Executive Assistant A.A.S. Degree . . . . .64 credits

## **Major Description**

In the changing business environment, Executive Assistants are experienced and organized office professionals. They will provide the expertise needed for creating and editing documents, spreadsheets, databases and electronic presentations. In addition, the Executive Assistant should be experienced in using the Internet, working with local area networks and designing web pages. This is the perfect major for people who are presently in the work force but need a new challenge or a way to advance their careers.

## **Nature of Work**

The Executive Assistant uses a variety of application software to generate correspondence and maintain spreadsheets and databases. The Executive Assistant also conducts electronic research, troubleshoots networked systems, schedules meetings, takes minutes, manages calendars, makes travel arrangements and works independently on special assignments.

## **Career Opportunities**

Graduates find employment in administrative support in a wide variety of businesses, including corporate headquarters, insurance companies, banks, manufacturing firms and government agencies.

## **Program Delivery**

Students can begin this program fall or spring semester. Courses are offered primarily during the day, however, there are some evening and Flextime Lab classes available. Full- or part-time starts are available.

## **MOS Certification**

DCTC offers courses to prepare students for the Microsoft Office Specialist (MOS) certification exam. MOS is the globally recognized standard for validating expertise with the Microsoft Office suite of business productivity software. For more information call 651-423-8428.

## **Flextime Lab**

Students unable to commit to a schedule every day can complete some Executive Assistant courses in the Flextime Lab. Courses are taught on an independent, self-paced basis under the guidance of a qualified instructor. For more information, call (651) 423-8251.

## **After DCTC**

DCTC has transfer agreements for this program with Southwest State University and Saint Mary's University. See Career Services for more information.

## **Program Prerequisite**

A three-minute typing test will be given before students can take OFFC1005 Keyboarding/Formatting. Students must achieve a speed of 35 words per minute with five or fewer errors to be admitted to the course. If students do not type at this level, they must successfully complete OFFC1000 Basic Keyboarding prior to registering for OFFC1005 Keyboarding/Formatting.

## **Student Outcomes**

1. Graduates will be prepared for immediate employment in their respective fields.
2. Graduates will have successfully completed coursework in a simulated office environment.
3. Graduates will be able to utilize software applications to produce mailable documents.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## **Executive Assistant A.A.S. Degree**

<u>Courses</u>	<u>Cr</u>
OFFC1005 Keyboarding/Formatting	3
OFFC1010 Business English Skills	2
OFFC1017 Technology for the Business Professional	3
OFFC1020 Office Procedures	4
OFFC1030 Word Processing	3
OFFC1040 Integrated Office Skills	3
OFFC1160 Basic Internet	2
OFFC1230 MS Publisher	2
OFFC1250 Introduction to MS Windows XP	2
OFFC1285 Oral Business Comm./Job Seeking Skills	2
OFFC1290 Written Business Communications	2
Total	28

### Technical Electives

Students may take as an elective any course listed in the Office Careers (OFFC), Computer Careers (COMC), Business Entrepreneur (ENTR), Supervisory Management (SMGT), or Travel and Tourism (TRVL) curriculums upon approval of advisor. Local Area Networking is highly recommended.

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Total	16
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### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

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Total	20
<b>TOTAL Program Requirements</b>	<b>64</b>

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# Exercise & Sport Science

Exercise and Sport Science A.S. Degree . . . . .	64 credits
Exercise and Sport Science A.A.S. Degree . . . . .	64 credits
Personal Training Certificate . . . . .	16 credits
Group Fitness Certificate . . . . .	16 credits
Geriatric Health and Fitness Certificate . . . . .	16 credits
Advanced Personal Training Certificate . . . . .	16 credits
Community Coaching Certificate . . . . .	16 credits

## Major Description

This program will provide educational experiences to students interested in seeking positions in a variety of health, fitness and sport occupations. The curriculum includes core courses in exercise sport science, as well as classes in supporting academic areas such as health science and physiology. Practical experiences are available throughout the program of study and through a final semester internship. Opportunities for practical experiences and internships are available on and off campus. An on-campus opportunity will be working in the college's Wellness Center.

The program will provide comprehensive curriculum content that will prepare students for various certification exams, such as those offered by the American Council on Exercise (ACE).

## Nature of Work

This program is designed for students planning to secure positions in fitness, sport and health occupations.

## Career Opportunities

Students will learn skills that will prepare them for various certifications as well as skills that will enable them to be valuable employees in fitness centers, the YMCA/ YWCA, corporate fitness centers, hospital-based wellness centers and cardiac rehabilitation centers.

## Program Delivery

Students can begin this program full- or part-time in the spring or fall semesters. Courses are offered during the day, evening, weekend and online. Classes meet at both DCTC's main campus and Human Performance Center.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: College of Saint Catherine and St. Cloud State University. See Career Services for more information.

## Program Prerequisites

Students must complete HEAL1000 First/Aid and CPR or have equivalent certification either before or at the same time they begin the program.

## Student Outcomes

1. Graduates of this program will be prepared for immediate employment in the exercise and sport science field or for transfer to a four-year college or university to complete a degree.
2. Graduates will be prepared for many national certification exams in the field of exercise and sport science.
3. Graduates will have the opportunity to gain work experience in the field through a practicum.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Exercise and Sport Science A.S. Degree

Students must complete HEAL1000 First/Aid and CPR or have equivalent certification before completing the program.

Courses		Cr
EXER1000	Introduction to Human Performance Studies	3
EXER1015	Personal Health and Wellness	3
EXER1020	Strength Training	2
EXER1025	Physical Conditioning	2
EXER1065	Psychology of Sport and Performance	3
EXER2295	Social and Ethical Aspects of Sport	3
INTS1010	Job Search Skills	1
Total		17

## Technical Electives

Students may select as an elective any course listed in the Exercise and Sport Science (EXER) curriculum upon approval of advisor. Other courses may be approved depending on student focus.

Total	13
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## General Education

The following courses are required:

BIOL1500	General Biology	4
BIOL2000	Anatomy and Physiology I	4
BIOL2010	Anatomy and Physiology II	4
SPEE1020	Interpersonal Communication	3
PSYC1100	General Psychology	3
ENGL1100	Writing and Research Skills	3
COML1400	Introduction to Computers	3
SOCY1110	Intro to Sociology <b>OR</b>	3
SOCY1010	Marriage & Family	

Total	27
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### General Education Electives

Students may select as an elective any courses from at least two of the following MnTC Goal Areas 4, 6, 8, 9, or 10.

Total	7
<b>TOTAL Program Requirements</b>	<b>64</b>

### Exercise and Sport Science A.A.S. Degree

Courses	Cr
EXER1000 Introduction to Human Performance Studies	3
EXER1015 Personal Health and Wellness	3
EXER1020 Strength Training	2
EXER1025 Physical Conditioning	2
EXER1050 Nutrition for Health & Human Performance	3
EXER1065 Psychology of Sport and Performance	3
EXER2020 Personal Training and Exercise Leadership I	2
EXER2060 Personal Training and Exercise Leadership II	2
EXER2090 Exercise for Special Populations	2
EXER2115 Applied Exercise Physiology	3
EXER2295 Social and Ethical Aspects of Sport	3
EXER2975 Practicum	3
INTS1010 Job Seeking Skills	1
Total	32

### Technical Electives

Students may select as an elective any course listed in the Exercise and Sport Science (EXER) curriculum upon approval of advisor. Other courses may be approved depending on student focus.

Total	8
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### General Education

The following courses are required:

BIOL1500 General Biology	4
BIOL2000 Anatomy and Physiology I	4
BIOL2010 Anatomy and Physiology II	4
SPEE1020 Interpersonal Communication	3
PSYC1100 General Psychology	3
ENGL1100 Writing and Research Skills	3
COML1400 Introduction to Computers	3
Total	24
<b>TOTAL Program Requirements</b>	<b>64</b>

### Personal Training Certificate

Courses	Cr
EXER1020 Strength Training	2
EXER1065 Psychology of Sport and Performance	3
EXER2020 Personal Training and Exercise Leadership I	2
EXER2975 Practicum	1
HEAL1000 First Aid/CPR	1
HEAL1101 Anatomy and Physiology	4
SPEE1020 Interpersonal Communications	3
Total	16
<b>TOTAL Program Requirements</b>	<b>16</b>

### Group Fitness Certificate

Courses	Cr
EXER1020 Strength Training	2
EXER1065 Psychology of Sport and Performance	3
EXER2020 Personal Training and Exercise Leadership I	2
EXER2250 Group Fitness Instruction	2
EXER2975 Practicum	2
HEAL1000 First Aid/CPR	1
HEAL1101 Anatomy and Physiology	4
Total	16
<b>TOTAL Program Requirements</b>	<b>16</b>

### Geriatric Health and Fitness Certificate

Courses	Cr
EXER1020 Strength Training	2
EXER2020 Personal Training and Exercise Leadership I	2
EXER2090 Exercise for Special Populations	2
EXER2250 Group Fitness Instruction	2
EXER2280 Health and Aging	3
HEAL1000 First Aid/CPR	1
HEAL1101 Anatomy and Physiology	4
Total	16
<b>TOTAL Program Requirements</b>	<b>16</b>

### Advanced Personal Training Certificate

(Must be ACE certified or have completed the Personal Training Certificate)

Courses	Cr
ENTR1650 Selling Strategies for the Entrepreneur	3
EXER1025 Physical Conditioning	2
EXER1050 Nutrition for Health and Human Performance	3
EXER2060 Personal Training and Exercise Leadership II	2
EXER2125 Applied Biomechanics & Movement Anatomy	3
MKTC1000 Principles of Marketing	3
Total	16
<b>TOTAL Program Requirements</b>	<b>16</b>

### Community Coaching Certificate

Courses	Cr
EXER1045 Organization and Management of Sports	3
EXER1200 Team and Individual Games	2
EXER2060 Personal Training and Exercise Leadership II	2
EXER2225 Theory of Coaching	2
EXER2235 Introduction to Athletic Training	3
EXER2975 Practicum	2
HEAL1010 CPR for the Professional Rescuer	1
HEAL1020 Advanced First Aid	1
Total	16
<b>TOTAL Program Requirements</b>	<b>16</b>

# Graphic Design Technology

Graphic Design Technology A.A.S. Degree. . . . .72 credits  
 Multimedia/Web Page Design A.A.S. Degree . . . .72 credits  
 Graphic Design Technology Diploma . . . . .64 credits  
 Electronic Publishing Diploma . . . . .64 credits

## Major Description

This program prepares an individual to design art and copy layouts for presentation by media such as books, magazines, newspaper, multimedia, Internet and packaging. The student will develop skills and knowledge to design, illustrate, layout, and produce visual graphic products which include both printed, Web and animated electronic formats.

## Nature of Work

This program prepares graduates for a variety of electronic publishing opportunities ranging from graphic animator for web and multimedia production, to graphic layout and design for print. Employers will make extensive use of the computer layout and design software.

## Career Opportunities

The graphic design professional will be involved in the manipulation of the computer in the electronic pre-press industry for companies such as book publishers, magazine publishers and newspapers. Career opportunities also include electronic media with animated graphics for the multimedia industry such as Internet, multimedia, and Web companies.

## Program Delivery

Students can begin this program fall or spring semester. A day and evening program are offered. Full- or part-time starts are available.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Bemidji State University, Metropolitan State University, Southwest State University and Saint Mary's University. See Career Services for more information.

## Student Outcomes

1. Graduates of the program will be prepared for employment in the graphic design field.
2. Students will have computer and graphic art skills.
3. Students will have a general knowledge of the graphics/web/multimedia industries.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Graphic Design Technology A.A.S. Degree

Courses	Cr
VCOM1001 Introduction to Visual Communications	2
VCOM1006 Color Theory and Applications	2
VCOM1010 Introduction to Photoshop	2
VCOM1015 Layout I	2
VCOM1021 Introduction to Photography	3
VCOM1030 Visual Design Fundamentals	3
VCOM1051 Scale and Perspective	2
VCOM1060 Creative Problem Solving	3
VCOM1400 Intro to QuarkXPress OR	2
VCOM1430 Intro to InDesign	
VCOM1410 Introduction to Illustrator	2
VCOM1415 Typography Fundamentals	2
VCOM1421 Introduction to Print Industry	2
VCOM1426 Print Processes	2
VCOM2000 VisCom Career/Portfolio Development	2
VCOM2400 Advanced Photoshop	3
VCOM2405 File Terminology	2
VCOM2410 Computer Image Output	2
VCOM2415 Advanced Electronic Publishing	3
VCOM2420 Advanced Computer Illustration	3
VCOM2425 Portfolio Development (Graphic Design)	2
VCOM2680 Introduction to Flash	2
VCOM2685 Web Page Construction I	2
Total	50

## Technical Electives

Students may select elective credits from Visual Communication curricula with the approval of the advisor.

Total	2
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## General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	20
<b>TOTAL Program Requirements</b>	<b>72</b>

## Multimedia/Web Page Design A.A.S. Degree

Courses	Cr
VCOM1001 Introduction to Visual Communications	2
VCOM1006 Color Theory and Applications	2
VCOM1010 Introduction to Photoshop	2
VCOM1015 Layout I	2
VCOM1021 Introduction to Photography	3
VCOM1030 Visual Design Fundamentals	3
VCOM1051 Scale and Perspective	2
VCOM1060 Creative Problem Solving	3
VCOM1400 Intro to QuarkXPress OR	2
VCOM1430 Intro InDesign	2
VCOM1406 Internet Fundamentals	1
VCOM1410 Introduction to Illustrator	2
VCOM1415 Typography Fundamentals	2
VCOM2000 VisCom Career/Portfolio Development	2
VCOM2605 Audio/Video for Multimedia	3
VCOM2650 Multimedia Project Management	2
VCOM2660 3D Modeling and Animation	3
VCOM2675 Web Tools	1
VCOM2680 Introduction to Flash	2
VCOM2685 Web Page Construction I	2
VCOM2690 Web Page Construction II	3
VCOM2694 Advanced Multimedia Production	2
VCOM2700 Advanced Flash Animation	3
VCOM2705 Portfolio Development (Web/Multimedia)	2
<b>Total</b>	<b>51</b>

### Technical Electives

Students may select their elective credits from courses in Visual Communication curricula with the approval of the advisor.

Total	1
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### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	20
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<b>TOTAL Program Requirements</b>	<b>72</b>
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## Graphic Design Technology Diploma

Courses	Cr
VCOM1001 Introduction to Visual Communications	2
VCOM1006 Color Theory and Applications	2
VCOM1010 Introduction to Photoshop	2
VCOM1015 Layout I	2
VCOM1021 Introduction to Photography	3
VCOM1030 Visual Design Fundamentals	3
VCOM1051 Scale and Perspective	2
VCOM1060 Creative Problem Solving	3
VCOM1400 Intro to QuarkXPress OR	2
VCOM1430 Intro to InDesign	2
VCOM1410 Introduction to Illustrator	2
VCOM1415 Typography Fundamentals	2
VCOM1421 Introduction to Print Industry	2
VCOM1426 Print Processes	2
VCOM2000 VisCom Career/Portfolio Development	2
VCOM2400 Advanced Photoshop	3
VCOM2405 File Terminology	2
VCOM2410 Computer Image Output	2

VCOM2415 Advanced Electronic Publishing	3
VCOM2420 Advanced Computer Illustration	3
VCOM2425 Portfolio Development (Graphic Design)	2
VCOM2680 Introduction to Flash	2
VCOM2685 Web Page Construction I	2
<b>Total</b>	<b>50</b>

### Technical Electives

Students may select their elective technical credits from courses in Visual Communication curricula with the approval of the advisor.

Total	5
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### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	9
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<b>TOTAL Program Requirements</b>	<b>64</b>
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## Electronic Publishing Diploma

Courses	Cr
VCOM1001 Introduction to Visual Communications	2
VCOM1006 Color Theory and Applications	2
VCOM1010 Introduction to Photoshop	2
VCOM1015 Layout I	2
VCOM1021 Introduction to Photography	3
VCOM1030 Visual Design Fundamentals	3
VCOM1060 Creative Problem Solving	3
VCOM1400 Introduction to QuarkXPress	2
VCOM1410 Introduction to Illustrator	2
VCOM1415 Typography Fundamentals	2
VCOM1421 Introduction to Print Industry	2
VCOM1426 Print Processes	2
VCOM1430 Introduction to InDesign	2
VCOM1435 Proofreading Fundamentals	1
VCOM2000 VisCom Career/Portfolio Development	2
VCOM2035 Layout II	3
VCOM2400 Advanced Photoshop	3
VCOM2405 File Terminology	2
VCOM2410 Computer Image Output	2
VCOM2415 Advanced Electronic Publishing	3
VCOM2420 Advanced Computer Illustration	3
VCOM2425 Portfolio Development (Graphic Design)	2
<b>Total</b>	<b>50</b>

### Technical Electives

Students may select their elective credits from courses in Visual Communication curricula with the approval of the advisor.

Total	5
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### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	9
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<b>TOTAL Program Requirements</b>	<b>64</b>
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# Heavy Construction Equipment Mechanic

Hvy. Const. Equip. Mechanic A.A.S. Degree . . . . .72 credits  
 Hvy. Const. Equip. Mechanic Diploma . . . . .64 credits  
 Hvy. Const. Equip. Maintenance Certificate . . . . .28 credits

## Major Description

The construction industry needs well-trained, mechanically minded, hard-working mechanics. All coursework is designed to prepare students to work with heavy equipment dealers and contractors. The instruction will involve classroom theory, mock-up demonstrations and repair of customers' heavy equipment. Making repairs on equipment plays a vital role in skill development. Mechanics already in the field can update their knowledge by registering for specific major courses.

## Nature of Work

Heavy construction equipment mechanics troubleshoot, rebuild, and repair loaders, scrapers, motor graders, excavators, backhoes, crawlers and other construction equipment. Mechanics use precision tools and power equipment to make repairs and to do periodic maintenance checks on hydraulic, hydrostatic, engine, electrical, mechanical and on-board computing systems. Construction mechanics work at field sites or in shops. High-tech equipment and advanced systems require the skills of well-paid, highly educated technical experts.

## Career Opportunities

Heavy equipment dealers and earth-moving contractors hire the majority of graduates. Jobs are also available with mining and logging companies and service departments related to the construction industry.

## Program Delivery

Students begin this program in the fall semester. Courses are offered during the day. A full-time start is preferred.

## After DCTC

DCTC has transfer agreements for this program with: Bemidji State University, Minnesota State University Moorhead, Southwest State University and Saint Mary's University. See Career Services for more information.

## Student Outcomes

1. Graduates will be prepared for employment in the heavy construction equipment field.
2. Students will build skills in heavy equipment repair, safety and communication, as well as teamwork.
3. Students will be familiar with a wide variety of construction equipment.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Heavy Construction Equipment Mechanic A.A.S. Degree

*Completion of this degree will also satisfy the requirements for the Advanced Caterpillar Technology A.A.S. degree, which prepares students for a challenging career with a focus on the Caterpillar product line. Ziegler/Caterpillar of Minnesota/Iowa has formed a partnership with DCTC to offer this degree.*

Courses	Cr
HCEM1101 General Shop Mechanics - Introduction	2
HCEM1110 Welding and Flame Cutting	2
HCEM1132 Heavy Duty Electrical	3
HCEM1140 Diesel Engine Overhaul I	4
HCEM1160 Specialized Lab I	3
HCEM1234 Heavy Duty Electronics	3
HCEM1246 Diesel Engine Overhaul II	3
HCEM1250 Brakes	2
HCEM1256 Diesel Engine Tune-up	3
HCEM1261 Specialized Lab II-A.A.S.	2
HCEM2115 Transmissions	4
HCEM2135 Hydraulics I	3
HCEM2145 Hydrostatic Systems	3
HCEM2176 Specialized Lab III-A.A.S.	2
HCEM2225 Track Drive Systems	3
HCEM2238 Hydraulics II	3
HCEM2255 Steering Systems	3
HCEM2265 Differentials	2
<b>Total</b>	<b>50</b>

## Technical Electives

Students may select their elective from the following courses:

HCEM2279 Specialized Lab IV	1-3
HCEM2280 Climate Control	2
<b>Total</b>	<b>2</b>

## General Education

See the General Education section of this college catalog.

<b>Total</b>	<b>20</b>
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<b>TOTAL Program Requirements</b>	<b>72</b>
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## Heavy Construction Equipment Mechanic Diploma

Courses	Cr
HCEM1101 General Shop Mechanics - Introduction	2
HCEM1110 Welding and Flame Cutting	2
HCEM1132 Heavy Duty Electrical	3
HCEM1140 Diesel Engine Overhaul I	4
HCEM1160 Specialized Lab I	3
HCEM1234 Heavy Duty Electronics	3
HCEM1246 Diesel Engine Overhaul II	3
HCEM1250 Brakes	2
HCEM1256 Diesel Engine Tune-up	3
HCEM1260 Specialized Lab II	3
HCEM2115 Transmissions	4
HCEM2135 Hydraulics I	3
HCEM2145 Hydrostatic Systems	3
HCEM2175 Specialized Lab III	3
HCEM2225 Track Drive Systems	3
HCEM2238 Hydraulics II	3
HCEM2255 Steering Systems	3
HCEM2265 Differentials	2
<b>Total</b>	<b>52</b>

### Technical Electives

Students may select their elective from the following courses:

HCEM2279 Specialized Lab IV	1-3
HCEM2280 Climate Control	2
<b>Total</b>	<b>3</b>

## 6 Steps to a Successful Start

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 12:45-2:30 p.m. every Tuesday, no appointment necessary (evening appointments also available)  
**651-423-8020**
- Apply for Admission w/\$20 Fee.**  
 Applications are available on the college web site ([www.dctc.edu](http://www.dctc.edu)) or in Student Services  
**651-423-8302**
- Take the Placement Test.**  
 Call for an appointment. Test can be scheduled the same day you come for Tuesday Campus Visit.  
**651-423-8409**
- Submit Transcripts.**  
 (If you graduated from high school in the last five years, are transferring college credits, have a previous degree, or have a GED certificate)  
**651-423-8302**
- Apply for Financial Aid.**  
 Applications available on [www.fafsa.ed.gov](http://www.fafsa.ed.gov) or in the Office of Scholarships and Financial Aid  
**651-423-8299**
- Register for Classes.**  
 You will then be invited in to a course advising and registration session  
**651-423-8038**

### General Education

See the General Education section of this college catalog.

Total	9
<b>TOTAL Program Requirements</b>	<b>64</b>

## Heavy Construction Equipment Maintenance Certificate

Courses	Cr
HCEM1101 General Shop Mechanics - Introduction	2
HCEM1110 Welding and Flame Cutting	2
HCEM1132 Heavy Duty Electrical	3
HCEM1140 Diesel Engine Overhaul I	4
HCEM1160 Specialized Lab I	3
HCEM1234 Heavy Duty Electronics	3
HCEM1246 Diesel Engine Overhaul II	3
HCEM1250 Brakes	2
HCEM1256 Diesel Engine Tune-up	3
HCEM1260 Specialized Lab II	3
<b>Total</b>	<b>28</b>
<b>TOTAL Program Requirements</b>	<b>28</b>

# Why DCTC?

Besides our programs and focus on technology, there are plenty of other great reasons for attending DCTC.

### 93% Job Placement

Year after year, we place more than 93% of our graduates in their field within six months of graduation. And as always, we offer life-time placement assistance to graduates.

### Working with Business

At DCTC, you'll find examples where our partnerships with local, state and national businesses benefit our students. Thanks to the work of our program advisory committees, we maintain active partnerships with more than 500 businesses and industries to ensure that students are receiving the skills employers are seeking, using the latest technology possible.

### Instructors who Live It

Our instructors don't just know this stuff, they live it. Instructors at DCTC have worked extensively in their professions and remain active in the industry. They bring their business and industry experience into their classrooms, shops, labs and studios. And our instructors do more than teach - they advise and mentor students. They make themselves available to students not just for help in coursework, but for help in achieving results, whether that's finding a new job or improving a current one.

### Partners in Education

DCTC has transfer agreements with many colleges and universities. These agreements provide the steps that can help students continue their education toward further certificates, diplomas and degrees. For more information on transfer agreements, visit Career Services.

# Heavy Duty Truck Technology

Heavy Duty Truck Technology A.A.S. Degree . . . . .72 credits  
 Heavy Duty Truck Technology Diploma . . . . .64 credits  
 Truck Fleet Maintenance Certificate . . . . .31 credits

## Major Description

Students in the Heavy Duty Truck Technology program will learn all aspects of heavy duty truck repair and maintenance. (The program focuses on large trucks, typically class 7 and 8). Some of the areas included are electrical systems, steering and alignment, and air and foundation brakes. Students will perform diesel engine troubleshooting, overhauls and tune-ups on both mechanical and electronic engines. Clutch, transmission, drive axle repair and overhaul will be taught along with welding instruction and preventive maintenance procedures. The instruction will include classroom theory, shop demonstrations, and hands-on skill development. Much of the shop work is performed on actual vehicles in operating condition.

## Nature of Work

Heavy duty truck technicians diagnose, troubleshoot and repair truck malfunctions to minimize time removed from service. Preventive maintenance is a major responsibility of the entry-level mechanic. The mechanic inspects the truck visually to determine the need for repairs and provides routine tests and maintenance. The heavy duty truck technician must have a thorough knowledge of truck components and be competent in safety inspections, tune-ups and troubleshooting.

## Career Opportunities

Employment opportunities for graduates are available with truck fleet companies, dealerships and truck repair shops. The employment outlook remains bright for graduates whose skills can prevent costly vehicle down time and keep company rigs and drivers on the road.

## Program Delivery

Students can begin this program in the fall semester only. Courses are offered during the day. A full-time start is preferred.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Bemidji State University, Minnesota State University Moorhead, Southwest State University and Saint Mary's University. See Career Services for more information.

## Student Outcomes

1. Graduates of this program will be prepared for employment in the heavy duty truck technology field.
2. Students will have hands-on training to simulate the real world environment.
3. Students will be familiar with the most current heavy duty truck related technology.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Heavy Duty Truck Technology A.A.S. Degree

Courses	Cr
HDTT1100 Truck Technology Fundamentals	4
HDTT1103 Air Brake Systems	6
HDTT1106 Welding Procedures	2
HDTT1109 Fluid Power Systems	2
HDTT1212 Preventive Maintenance	4
HDTT1215 Suspensions and Steering Systems	4
HDTT1218 Electrical Systems	4
HDTT1222 Truck A/C	2
HDTT2101 Drive Train I	6
HDTT2104 Drive Train II	4
HDTT2107 Diesel Fundamentals	3
HDTT2110 Diesel Fuel Systems	1
HDTT2213 Diesel Engine Fundamentals	4
HDTT2216 Diesel Electronics	3
HDTT2970 Internship or HDTT2222 Diesel Engine Lab	3
<b>Total</b>	<b>52</b>

## General Education

See the General Education section of this college catalog.

Total	20
<b>TOTAL Program Requirements</b>	<b>72</b>

## Heavy Duty Truck Technology Diploma

Courses	Cr
HDTT1100 Truck Technology Fundamentals	4
HDTT1103 Air Brake Systems	6
HDTT1106 Welding Procedures	2
HDTT1109 Fluid Power Systems	2
HDTT1212 Preventive Maintenance	4
HDTT1215 Suspensions and Steering Systems	4
HDTT1218 Electrical Systems	4
HDTT1222 Truck A/C	2
HDTT2101 Drive Train I	6
HDTT2104 Drive Train II	4
HDTT2107 Diesel Fundamentals	3
HDTT2110 Diesel Fuel Systems	1
HDTT2213 Diesel Engine Fundamentals	4
HDTT2216 Diesel Electronics	3
HDTT2222 Diesel Engine Lab or HDTT2970 Internship	6
<b>Total</b>	<b>55</b>

### General Education

See the General Education section of this college catalog.

Total	9
<b>TOTAL Program Requirements</b>	<b>64</b>

## Truck Fleet Maintenance Certificate

Courses	Cr
HDTT1100 Truck Technology Fundamentals	4
HDTT1103 Air Brake Systems	6
HDTT1106 Welding Procedures	2
HDTT1109 Fluid Power Systems	2
HDTT1212 Preventive Maintenance	4
HDTT1215 Suspensions and Steering Systems	4
HDTT1218 Electrical Systems	4
HDTT1222 Truck A/C	2
<b>Total</b>	<b>28</b>

### General Education

The following course is required:

COML1400 Introduction to Computers	3
<b>Total</b>	<b>3</b>
<b>TOTAL Program Requirements</b>	<b>31</b>

## 6 Steps to a Successful Start

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 (If you graduated from high school in the last five years, are transferring college credits, have a previous degree, or have a GED certificate)  
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- Apply for Financial Aid.**  
 Applications available on [www.fafsa.ed.gov](http://www.fafsa.ed.gov) or in the Office of Scholarships and Financial Aid  
**651-423-8299**
- Register for Classes.**  
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### Instructors who Live It

Our instructors don't just know this stuff, they live it. Instructors at DCTC have worked extensively in their professions and remain active in the industry. They bring their business and industry experience into their classrooms, shops, labs and studios. And our instructors do more than teach - they advise and mentor students. They make themselves available to students not just for help in coursework, but for help in achieving results, whether that's finding a new job or improving a current one.

### Partners in Education

DCTC has transfer agreements with many colleges and universities. These agreements provide the steps that can help students continue their education toward further certificates, diplomas and degrees. For more information on transfer agreements, visit Career Services.

# *Industrial Distribution*

Industrial Distribution A.A.S. Degree . . . . .68 credits

## **Major Description**

The Industrial Distribution Associate in Applied Science Degree is designed to provide the knowledge and skills necessary to be successful in the highly rewarding industrial distribution field. Distributors serve the industrial market through a variety of products and services and are vital to today's business economy.

## **Nature of Work**

Industrial distributors are professionals that buy, sell and deliver thousands of products from the manufacturers to the consumers that use them. Industrial distributors call on customers and take orders, introduce new products, describe features, solve problems and purchase and inventory goods.

## **Career Opportunities**

There are many career paths you can take, working for either a distributor or a manufacturer that uses distributors to service customers. Career opportunities with distributors or manufacturers include Customer Service/ Inside Sales, Technical Sales, Field Sales, Purchasing, Sales Management, Branch Management, and Distribution Management.

## **Program Delivery**

Students can begin this program fall, spring or summer semester. Courses are offered to accommodate a variety of schedules, including days, evenings, weekends and online. Full- and part-time starts are available. For more information, meet with an advisor or counselor before entering this degree program.

## **After DCTC**

DCTC has pending transfer agreements with many public and private colleges and universities.

## **Advanced Standing**

Previous college courses, certification, licensure and training may be considered for credit in the major. The responsibility for seeking credit rests with the student and can be initiated by completing the course SMGT2950 Prior Experiential Learning Portfolio Development (1 elective credit).

## **Student Outcomes**

1. Students will learn and apply general knowledge and skills necessary to be familiar with current business practices.

2. Enhance growth opportunities within the wide spectrum of industrial distribution careers.
3. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## **Industrial Distribution A.A.S. Degree**

(Pending MnSCU Board approval)

Courses	Cr
ELEC 1110 DC Electricity Theory and Lab	3
ELEC 1120 AC Electricity Theory and Lab	3
ELEC 2110 Electrical Apparatus Theory	3
ELEC 1140 Blueprint Reading for Technicians	3
ELEC 1740 Industrial Hydraulic & Pneumatics	2
ELEC 1730 Systems Troubleshooting	2
ELEC 2970 Internship / Field Experience (Capstone)	3
MKTC 1000 Principles of Marketing	3
MKTC 1200 Professional Sales	3
SMGT 1080 Introduction to Distribution Careers	1
SMGT 1081 Business Principles	3
SMGT 1082 Distribution, Operations, & Logistics	3
SMGT 1205 Total Quality Management	4
SMGT 1231 Planning & Project Management	2
SMGT 1242 Effective Business Communication	3
SMGT 1250 Managing Customer Service	1
Total	42

## **Technical Electives**

Students may select as an elective any course listed in the Electrical Construction and Maintenance Technology (ELEC), Biomedical Equipment Technician (BMET), Concrete and Masonry (CONC), Nanoscience Technology (NANO), and Welding Technology (WELD) curriculums upon approval by advisor.

Total	6
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## **General Education**

The following courses are required:

COML1400 Introduction to Computers	3
ENGL1100 Writing and Research Skills	3
ENGL 1200 Technical Writing	3
MATS1350 Math for Liberal Arts	4
SPEE1020 Interpersonal Communications	3
Total	16

## **General Education Electives**

Electives (Goal 3 or 4)	4
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Total	4
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<b>TOTAL Program Requirements</b>	<b>68</b>
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## What is Industrial Distribution (ID):

Industrial Distribution is a fast growing segment of the economy and of critical importance in the manufacturing and construction supply chain. ID is simply defined as the instrument that moves products from manufacturers to users.

## Qualified Employees are Needed:

Dakota County Technical College (DCTC) has recognized that Industrial distributors and manufacturers generate tens of thousands of jobs across the US and Canada. ID employees 1 in 20 workers in the US and a minimum of 180,000 new employees will be needed in the next five years according to the Department of Labor. DCTC created this degree in partnership with the Power Transmission Distribution Association (PTDA) to meet the current and future needs of this industry.

## What are Typical Careers in ID:

- 1 Customer service
- 1 Inside sales
- 1 Field sales
- 1 Finance & accounting
- 1 Inventory control
- 1 Information systems
- 1 Marketing and advertising
- 1 Operations
- 1 Purchasing Applications engineering
- 1 Management in distribution, sales and marketing
- 1 Expeditors
- 1 Technical support

In 2006, salaries range from \$28,000 to \$70,000 depending on the position and length of service.

# 6 Steps to a Successful Start

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2.  **Apply for Admission w/\$20 Fee.**  
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3.  **Take the Placement Test.**  
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4.  **Submit Transcripts.**  
(If you graduated from high school in the last five years, are transferring college credits, have a previous degree, or have a GED certificate)  
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5.  **Apply for Financial Aid.**  
Applications available on [www.fafsa.ed.gov](http://www.fafsa.ed.gov) or in the Office of Scholarships and Financial Aid  
**651-423-8299**
6.  **Register for Classes.**  
You will then be invited in to a course advising and registration session  
**651-423-8038**

# Information Technology Assistant

Information Technology Assistant Certificate . . . . .28 credits

## Major Description

This certificate is designed to assist students in becoming trained professionals who relate well with others and process information using integrated information systems. The Information Technology Assistant Certificate program trains students in the Windows environment and allows exposure to many of today's best-selling software packages. These include, among others, word processing, telecommunications, database applications, spreadsheet applications, graphics and electronic mail using up-to-date computer-age technology. This provides an opportunity for the student to obtain a higher level of knowledge and self-esteem for entering the job market.

## Nature of Work

The Information Technology Assistant will use the skills learned in the certificate program on a daily basis in today's high-tech world to perform a full range of tasks including, but not limited to, creating and revising business documents, correspondence, reports, budgets and presentations. The Information Technology Assistant may also be responsible for gathering and researching information through the Internet.

## Career Opportunities

Graduates find challenging and fulfilling employment opportunities in a variety of businesses including, but not limited to, insurance companies, banks, manufacturing companies and government agencies. The graduates will find opportunities for employment in companies ranging from small businesses to large national or international corporations. With additional training, a student can specialize in a medical or administrative diploma program.

## Program Delivery

Students can begin this program fall or spring semester. The majority of the required courses are Flextime Lab offerings (self-paced courses). Full- or part-time starts are available.

## MOS Certification

DCTC offers courses to prepare students for the Microsoft Office Specialist (MOS) certification exam. MOS is the globally recognized standard for validating expertise with the Microsoft Office suite of business productivity software. For more information call 651-423-8428.

## Program Prerequisite

A three-minute typing test will be given before students can take OFFC1005 Keyboarding/Formatting. Students must achieve a speed of 35 words per minute with five or fewer errors to be admitted to the course. If students do not type at this level, they must successfully complete Basic Keyboarding prior to registering for OFFC1005 Keyboarding/Formatting

## Student Outcomes

1. Graduates will be prepared for immediate employment in their respective field.
2. Graduates will be able to utilize software applications to produce mailable documents.

## Information Technology Assistant Certificate

Courses		Cr
OFFC1005	Keyboarding/Formatting	3
OFFC1010	Business English Skills	2
OFFC1130	MS Word I	2
OFFC1135	MS Excel I	2
OFFC1140	MS Access I	2
OFFC1145	MS PowerPoint	2
OFFC1150	MS Word II	2
OFFC1155	MS Excel II	2
OFFC1160	Basic Internet	2
OFFC1250	Introduction to Microsoft Windows XP	2
OFFC1285	Oral Business Comm./Job Seeking Skills	2
OFFC1290	Written Business Communications	2
Total		25

## General Education

The following course is required:

SPEE1020	Interpersonal Communication	3
Total		3
<b>TOTAL Program Requirements</b>		<b>28</b>

# Information Technology & Telecommunications Convergence

Information Technology & Telecommunications Convergence Diploma . . . . .34 credits

## Major Description

Telecommunications is a broad term encompassing communications information; (i.e. voice, data, video;) over a wide variety of networks. Technicians are expected to understand and use a wide variety of test equipment and install and repair business phone/data systems using different types of communications media such as fiber optics, copper and wireless systems.

## Nature of Work

IT & Telecommunications Convergence work is sophisticated and technical. Technicians install and maintain business telephone/data systems or telecommunications network systems or do diagnostic work on system impairments. Most work is done in office and corporate settings.

## Career Opportunities

Excellent opportunities exist with corporate telecommunications divisions, telephone and computer interconnect companies, system installation companies and other areas of the communication industry using voice/data equipment.

## Program Delivery

Students can begin this program fall semester. Courses are offered during the day. Full- or part-time starts are available.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Bemidji State University, Minnesota State University Moorhead, Southwest State University, the University of Minnesota–Crookston and Saint Mary's University. See Career Services for more information.

## Student Outcomes

1. Graduates completing the IT & Telecommunications Convergence program will be prepared for employment in the telecommunications industry.
2. Students will think critically in a technical setting.

## IT & Telecommunications Convergence Diploma

Courses	Cr
TELT1112 D.C. Electricity	3
TELT1113 Media I (Copper)	3
TELT1119 Intro to Telephony	3
TELT1123 A.C. Electricity	3
TELT1131 Basic Operating Systems	2
TELT1232 Media II (Fiber-Op)	3
ITTC1231 Microcomputer System Maintenance	3
ITTC2131 Applied Networking	3
ITTC2231 Networking Technology I	3
TELT1221 Advanced Telephony	3
TELT1223 Digital Circuits	3
TELT2131 Intro to Data Comm	2
Total	34

## Technical Electives

Students may select as an elective any course listed in the IT & Telecommunications Convergence (TELT), Information Technology and Telecommunications core (ITTC), or Computer Careers (COMC) curriculum upon approval of their advisor.

Total	6
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## General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	9
<b>TOTAL Program Requirements</b>	<b>64</b>



# Interior Design

Interior Design A.A.S. Degree .....85 credits  
Interior Design Diploma .....64 credits

## Major Description

The Interior Design Program leading to an A.A.S. Degree prepares an individual with the training necessary to enter the interior design profession. The student will develop skills and knowledge to design functional and aesthetically pleasing environments that enhance the quality of life while protecting the health, safety and welfare of the public. Students use design theories, interior materials, building codes, manual and computer aided drafting to develop and prepare design solutions for residential, kitchen and bath and commercial projects.

## Nature of Work

An interior designer partners with clients using the design process, which begins with programming (analyzing the project requirements), schematic and final design development (spatial arrangement, selections of materials and furnishings) and ends with contract documentation (drawings and specifications) and project administration. The design disciplines offer a variety of positions that are stimulating and challenging, creating solutions that are developed to meet client specifications and budget parameters.

## Career Opportunities

This program enables the Interior Design graduate an opportunity to assist a design professional in a residential or commercial firm, along with several other design positions available in the industry.

## Program Delivery

Students can begin this program in the fall semester only. A day and evening program are offered. Full- or part-time starts are available.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Bemidji State University, Metropolitan State University, Southwest State University and Saint Mary's University. See Career Services for more information.

## Accreditation

The Interior Design A.A.S. Degree is accredited by the Council for Interior Design Accreditation (CIDA), formerly known as FIDER, at the professional level. CIDA is an accreditation body within the interior design profession to assess, develop and define standards for academic programs and to assure excellence in educational programs in order to reflect the needs of the profession and the consumer.

The Interior Design Program is also endorsed by The National Kitchen and Bath Association (NKBA). NKBA establishes requirements to assure quality education for students who desire to become kitchen/bathroom design professionals. (Students that complete an NKBA Endorsed Programs and a monitored internship/ work experience in the Kitchen/Bath industry will qualify to submit an NKBA Graduation Verification Form to receive recognition of achievement from the National Kitchen & Bath Association).

## Professional Organizations

Students in the Interior Design major may participate as student members in five professional organizations. These organizations include: American Society of Interior Designers (ASID), International Furnishings and Design Association (IFDA), International Interior Design Association (IIDA), National Executive Women in Hospitality (NEWH) and the National Kitchen and Bath Association (NKBA). Participation in any or all of these organizations increases the student's professional knowledge and awareness of the interior design field while providing an opportunity to network with professionals in the community. Students attend conferences such as NeoCon, Kitchen and Bath Conferences, participate in showroom tours, attend local markets at International Market Square and speaker presentations. In addition, participating in local committees of professional organizations, being student board representatives, and participating in student competitions provide strong communication and networking skills.

## Student Outcomes

1. Students completing the Interior Design program will be prepared for employment in the Residential, Commercial and Kitchen & Bath professions.

2. Graduates will obtain work experience through the internship course.
3. The Interior Design program has established general education coursework in compliance with the Minnesota State Transfer Curriculum (MnTC) to meet its accreditation agencies recommended guidelines.

A minimum of 30 general education credits must be completed prior to and/or concurrent with the 55 Interior Design credits for the A.A.S. Degree.

## Interior Design A.A.S. Degree

(CIDA Professional Accreditation)

Courses	Cr
IDES1100 Design Fundamentals	4
IDES1110 Drafting for Interiors	4
IDES1120 Critical Thinking and Programming	4
IDES1135 Visual and Verbal Presentations	3
IDES1206 Residential Studio I	3
IDES1217 Commercial Studio I	3
IDES1225 Computer Aided Drafting	3
IDES1230 History of Art, Architecture, and Interiors	4
IDES2100 Interior Design Career Directions	1
IDES2106 Color and Light	3
IDES2110 Materials, Estimating, and Specifications	3
IDES2136 Commercial Studio II	4
IDES2146 Residential Studio II (Kitchen and Bath)	4
IDES2200 Professional Business Practices and Sales	3
IDES2210 Senior Studio	5
IDES2970 Internship	4
<b>Total</b>	<b>55</b>

### General Education

The following courses are required (follows Minnesota Transfer Curriculum MnTC):

ENGL1100 Writing and Research Skills	3
SPEE1020 Interpersonal Communication	3

Select one elective from each of the following goal areas:

Goal 3 Natural Science	3
Goal 4 Math	3
Goal 5 History and Social and Behavioral Science	3
Goal 8 Global Perspectives	3
Goal 10 People and the Environment	3

Select nine credits of elective courses from Goals 1-10

Goals 1-10 Electives	9
<b>Total</b>	<b>30</b>
<b>TOTAL Program Requirements</b>	<b>85</b>

A minimum of 30 semester credit hours of diverse college-level liberal arts and sciences is required for graduation from the program. These credit hours must be attained from an institution that has been recognized by the appropriate institutional accrediting body; they may be taken prior to or concurrently with discipline-specific course work.

## Interior Design Diploma

Courses	Cr
IDES1100 Design Fundamentals	4
IDES1110 Drafting for Interiors	4
IDES1120 Critical Thinking and Programming	4
IDES1135 Visual and Verbal Presentations	3
IDES1206 Residential Studio I	3
IDES1217 Commercial Studio I	3
IDES1225 Computer Aided Drafting	3
IDES1230 History of Art, Architecture, and Interiors	4
IDES2100 Interior Design Career Directions	1
IDES2106 Color and Light	3
IDES2110 Materials, Estimating, and Specifications	3
IDES2136 Commercial Studio II	4
IDES2146 Residential Studio II (Kitchen and Bath)	4
IDES2200 Professional Business Practices and Sales	3
IDES2210 Senior Studio	5
IDES2970 Internship	4
<b>Total</b>	<b>55</b>

### General Education Requirements

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

<b>Total</b>	<b>9</b>
<b>TOTAL Program Requirements</b>	<b>64</b>

# 6 Steps to a Successful Start

1.  **Attend a Tuesday Campus Visit.**  
12:45-2:30 p.m. every Tuesday, no appointment necessary (evening appointments also available)  
**651-423-8020**
2.  **Apply for Admission w/\$20 Fee.**  
Applications are available on the college web site ([www.dctc.edu](http://www.dctc.edu)) or in Student Services  
**651-423-8302**
3.  **Take the Placement Test.**  
Call for an appointment. Test can be scheduled the same day you come for Tuesday Campus Visit.  
**651-423-8409**
4.  **Submit Transcripts.**  
(If you graduated from high school in the last five years, are transferring college credits, have a previous degree, or have a GED certificate)  
**651-423-8302**
5.  **Apply for Financial Aid.**  
Applications available on [www.fafsa.ed.gov](http://www.fafsa.ed.gov) or in the Office of Scholarships and Financial Aid  
**651-423-8299**
6.  **Register for Classes.**  
You will then be invited in to a course advising and registration session  
**651-423-8038**

# Landscape/Horticulture

Landscape/Horticulture A.A.S. Degree . . . . .72 credits  
Landscape/Horticulture Diploma . . . . .65 credits

## Major Description

This major provides the knowledge, technical skills and business skills needed for success in the landscape industry. First-year students learn the basic science and technical skills of all the related fields of Landscape Horticulture. Second-year students can specialize in one of three interest areas: Design and Sales, Landscape Construction or Plant Production (nursery and greenhouse). Landscape business management subjects are also included in the second year. Instruction includes both classroom and lab activities. The 200+ acre campus, including greenhouses and a 1-1/2-acre nursery, serves as a resource and lab for many courses.

## Nature of Work

Landscape professionals design, install and care for residential, commercial and public landscapes. In addition to working with plants, they design and install landscape features such as decks, retaining walls and patios. The landscape professional may specialize in plant production for nurseries, greenhouses, and garden centers.

## Career Opportunities

Graduates enter a range of businesses including interior and exterior landscape or maintenance firms, design firms, nurseries, garden centers, or greenhouses. Some graduates are employed by parks, golf courses, or government agencies. Many graduates operate their own businesses.

## Program Delivery

Students can begin this program fall or spring semester. Courses are offered primarily during the day. Full- or part-time starts are available.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Southwest State University, the University of Minnesota–Crookston, Saint Mary’s University, University of Minnesota–St. Paul and University of Wisconsin River Falls. See Career Services for more information.

## Accreditation

This major is nationally accredited by the Professional Landcare Network (PLANET), the industry’s national trade organization. PLANET defines standards for academic programs and assesses individual programs to assure excellence in meeting the needs of the students, industry and consumer. The Landscape Horticulture Program at DCTC is currently the only PLANET accredited program in the state.

## Professional Organization

Students may participate as student members of both state and national organizations. Many students are active in the Minnesota Nursery and Landscape Association (MNLA) that offer opportunities for networking with professionals and for education through MNLA workshops. The program also helps students pass the examination to become MNLA Certified Professionals. The MNLA offers two scholarships to DCTC students each year.

As a PLANET accredited program, several students annually participate in the national PLANET Student Career Days. PLANET also offers competitive scholarships to DCTC students.

A very active Landscape Horticulture club serves the students by offering various opportunities for educational enrichment. The club, MNLA, and PLANET provide opportunities for professional growth and leadership.

## Student Outcomes

1. Graduates of the program will be prepared for employment in the landscape horticulture field.
2. Students will have work experience through internships and hands-on projects.
3. Students will develop a high level of professionalism.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Landscape/Horticulture A.A.S. Degree

Courses	Cr
ACCT1005 Principles of Bookkeeping	2
LAHT1000 Plant Science	2

LAHT1010	Soil Science	3
LAHT1100	Woody Plant Materials I	2
LAHT1110	Woody Plant Materials II	2
LAHT1200	Plant Pests	3
LAHT1300	Landscape Construction I	3
LAHT1310	Plant Maintenance	2
LAHT1320	Turf Management	3
LAHT1400	Greenhouse Operations	2
LAHT1410	Nursery Operations	2
LAHT1502	Safety and Equipment	1
LAHT1510	Landscape Mathematics	1
LAHT1600	Landscape Design I	3
LAHT2970	Supervised Occupational Experience I	1
LAHT2970	Supervised Occupational Experience II	1
LAHT2000	Herbaceous Plant Materials	2
LAHT2500	Landscape Business Management	4
LAHT2510	Landscape Estimating	3
LAHT2970	Supervised Occupational Experience III	1
LAHT2970	Supervised Occupational Experience IV	1
Total		44

### Technical Electives

Students may select elective credits from the Landscape Horticulture curriculum, as well as First Aid (HLTH1000 or others), with the approval of the advisor.

Total	8
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### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Spanish (SPAN1100 and SPAN1200) is a recommended General Education elective.

Total	20
<b>TOTAL Program Requirements</b>	<b>72</b>

### Landscape/Horticulture Diploma

Courses	Cr	
ACCT1005	Principles of Bookkeeping	2
LAHT1000	Plant Science	2
LAHT1010	Soil Science	3
LAHT1100	Woody Plant Materials I	2
LAHT1110	Woody Plant Materials II	2
LAHT1200	Plant Pests	3
LAHT1300	Landscape Construction I	3
LAHT1310	Plant Maintenance	2
LAHT1320	Turf Management	3
LAHT1400	Greenhouse Operations	2
LAHT1410	Nursery Operations	2
LAHT1502	Safety and Equipment	1
LAHT1510	Landscape Mathematics	1
LAHT1600	Landscape Design I	3
LAHT2970	Supervised Occupational Experience I	1
LAHT2970	Supervised Occupational Experience II	1
LAHT2000	Herbaceous Plant Materials	2
LAHT2500	Landscape Business Management	4
LAHT2510	Landscape Estimating	3
LAHT2970	Supervised Occupational Experience IV	1

LAHT2970	Supervised Occupational Experience V	1
Total		44

### Technical Electives

Students may select elective credits from the Landscape Horticulture curriculum, as well as First Aid (HLTH1000 or others), with the approval of the advisor.

Total	12
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### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	9
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<b>TOTAL Program Requirements</b>	<b>65</b>
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## 6 Steps to a Successful Start

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- Apply for Admission w/\$20 Fee.**  
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**651-423-8299**
- Register for Classes.**  
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**651-423-8038**

# Legal Administrative Assistant

Legal Administrative Assistant A.A.S. Degree . . .64 credits

## Major Description

This major is designed to prepare students to work in a variety of legal-related fields. Specialized legal courses include civil procedures, family law, and criminal law, as well as exposure to basic legal concepts through courses in transactional law and legal proofreading and editing. Students will also take a variety of general administrative courses covering keyboarding, communications, and software applications.

## Nature of Work

The Legal Administrative Assistant program is designed to prepare students to become integral members of a law office or legal department. These students will study information focusing on a variety of legal applications including civil procedures, family law and criminal law, and ethics, as well as general office applications. They will also become skilled in use of various software programs such as word processing, e-mail, and time and billing. Students will learn legal terminology and be able to produce a variety of legal documents.

## Career Opportunities

Graduates find employment opportunities as legal administrative assistants in law firms, court systems, insurance agencies, legal and trust departments of banks, large corporations, and government agencies.

## Program Delivery

Students can begin this program fall or spring semester. Legal courses are offered on-line, and general courses are offered primarily during the day. Full- or part-time starts are available.

## MOS Certification

DCTC offers courses to prepare students for the Microsoft Office Specialist (MOS) certification exam. MOS is the globally recognized standard for validating expertise with the Microsoft Office suite of business productivity software. For more information call 651-423-8428.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Southwest State University and Saint Mary's University. See Career Services for more information.

## Program Prerequisite

A three-minute typing test will be given before students can take OFFC1005 Keyboarding/Formatting. Students must achieve a speed of 35 words per minute with five or fewer errors to be admitted to the course. If students do not type at this level, they must successfully complete OFFC1000 Basic Keyboarding prior to registering for OFFC1005 Keyboarding/ Formatting.

## Student Outcomes

1. Graduates will be prepared for immediate employment in their respective fields.
2. Graduates will have successfully completed coursework in a simulated office environment.
3. Graduates will be able to utilize software applications to produce mailable documents.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Legal Administrative Assistant A.A.S. Degree

(Pending MnSCU Board approval)

\* Courses offered online from South Central College - Mankato

Courses		Cr
OFFC1005	Keyboarding/Formatting	3
OFFC1010	Business English Skills	2
OFFC1017	Technology for the Business Professional	3
OFFC1020	Office Procedures	4
OFFC1030	Word Processing	3
OFFC1040	Integrated Office Skills	3
OFFC1160	Basic Internet	2
OFFC1230	MS Publisher	2
OFFC1250	Introduction to MS Windows XP	2
OFFC1285	Oral Business Comm./Job Seeking Skills	2
OFFC1290	Written Business Communications	2
OTEC1725	Transactional Law*	3
OTEC1730	Civil Procedures*	3
OTEC2735	Family Law/Criminal Law*	3
OTEC2740	Legal Proofreading & Editing*	3

Total	40
<b>Technical Electives</b>	
Students may take as an elective any course listed in the Office of Careers (OFFC), Computer Careers (COMC), Business Entrepreneur (ENTR), Supervisory Management (SMGT), or Travel and Tourism (TRVL) curriculums upon approval of advisor. Local Area Networking is highly recommended.	
Total	4

<b>General Education</b>	
COML1400	Introduction to Computers 3
ENGL1100	Writing and Research Skills 3
PHIL1100	Ethics 3
SPEE1020	Interpersonal Communication 3
	Math/Science 3 - 4
	Electives 4 - 5
<hr/>	
Total	20
<b>TOTAL Program Requirements</b>	<b>64</b>

## 6 Steps to a Successful Start

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- Register for Classes.**  
 You will then be invited in to a course advising and registration session  
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## Why DCTC?

Besides our programs and focus on technology, there are plenty of other great reasons for attending DCTC.

### 94% Job Placement

Year after year, we place more than 94% of our graduates in their field within six months of graduation. And as always, we offer life-time placement assistance to graduates.

### Working with Business

At DCTC, you'll find examples where our partnerships with local, state and national businesses benefit our students. Thanks to the work of our program advisory committees, we maintain active partnerships with more than 500 businesses and industries to ensure that students are receiving the skills employers are seeking, using the latest technology possible.

### Instructors who Live It

Our instructors don't just know this stuff, they live it. Instructors at DCTC have worked extensively in their professions and remain active in the industry. They bring their business and industry experience into their classrooms, shops, labs and studios. And our instructors do more than teach - they advise and mentor students. They make themselves available to students not just for help in coursework, but for help in achieving results, whether that's finding a new job or improving a current one.

### Partners in Education

DCTC has transfer agreements with many colleges and universities. These agreements provide the steps that can help students continue their education toward further certificates, diplomas and degrees. For more information on transfer agreements, visit Career Services.

# Management for Technical Professionals

Mgmt. for Technical Professionals A.A.S. Degree . . . . .64 credits  
 Mgmt. for Airline Professionals A.A.S. Degree . . . . .64 credits

## Major Description

The program is specifically designed to provide persons experienced in a technical field with the skills necessary to be successful in a position of leadership and to enhance their career mobility. This degree program is highly individualized based on each student's technical experience and educational needs.

Students who do not have experience in a technical field should consider the Supervisory Management Program.

## Advanced Standing

Previous college courses, certification, licensure and training may be considered for credit in the major. The responsibility for seeking credit rests with the student and can be initiated by completing the course SMGT2950, Prior Experiential Learning Portfolio Development.

## Program Delivery

The degree format is designed for flexibility. Students can begin this program fall, spring, or summer semester. Day, evening, weekend and online course are offered. Full or part-time starts are available. Courses in this program are offered at DCTC's Apple Valley Higher Education site. Courses are scheduled monthly, so it doesn't matter when you start!

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Minnesota State University Moorhead, Southwest State University and Saint Mary's University. See Career Services for more information.

## Student Outcomes

1. Graduates of the program will be prepared for employment at a supervisory level.
2. Students will demonstrate leadership skills to achieve a productive work environment.
3. Students will demonstrate effective interpersonal communication skills.
4. Students will demonstrate analytical skills in identifying and solving problems.
5. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Management for Technical Professionals A.A.S. Degree

Courses	Cr
Technical Experiential Learning credits	1-30

### Technical Electives \*

Students may select courses from the Supervisory Management program. Courses selected must be approved by the advisor.

Total	14-33
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### General Education

See General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	20
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<b>TOTAL Program Requirements</b>	<b>64</b>
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## Management for Airline Professionals A.A.S. Degree

Courses	Cr
Aviation Experiential Learning credits	1-30

### Technical Electives \*

Students may select courses from the Supervisory Management program. Courses selected must be approved by the advisor.

Total	14-33
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### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu)

Total	20
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<b>TOTAL Program Requirements</b>	<b>64</b>
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\* Note: Students electing to take SMGT2950, Prior Experiential Learning Portfolio Development, will receive one elective credit reducing the technical elective requirement.

To learn more about the Certified Managers program, contact:  
**Scott Gunderson at 651-423-8295**  
 or email [scott.gunderson@dctc.edu](mailto:scott.gunderson@dctc.edu)

# Marketing & Sales

Business Marketing Specialist A.A.S. Degree . . . . .	72 credits
Marketing Design Specialist A.A.S. Degree . . . . .	72 credits
Marketing Design Specialist Diploma . . . . .	53 credits
Marketing Communications Specialist Certificate . . . . .	28 credits
Sales Specialist Certificate . . . . .	12 credits

## Major Description

Marketing is a vast field, training people for multitudes of professions. It is also estimated that more than a third of all Americans have marketing activities in their positions.

Marketing is critical to the success of every organization, whether large or small, profit or nonprofit, product- or service-oriented. To provide quality customer service, these organizations must identify and research target markets, determine customer needs, and establish how products and services can most effectively be distributed, priced and promoted.

**Marketing Communications Specialist:** A Marketing Communications Specialist possesses the knowledge of all general marketing concepts and skillfully uses these in the advancement of an organization. Knowledge includes consumer buying behavior, market segmentation, product life cycle, packaging, branding, pricing, advertising, sales promotion, public relations, personal selling, product distribution methods and creation of a marketing plan. The specialist must also know the legal, behavioral, ethical, competitive, economic, technological and international factors affecting product, pricing, promotion and marketing channel decisions.

**Business Marketing Specialist:** This degree will provide the skills discussed in the Marketing Communications Specialist certificate, along with photography, management, budgeting and accounting, business communications, strategic planning and presentation skills.

**Marketing Design Specialist:** A Marketing Design Specialist possesses the knowledge of all general marketing concepts, along with the basics of graphic design and photography. In addition to the knowledge described in the Marketing Communications Specialist program, the Marketing Design Specialist graduate will also have an understanding of basic design, graphic design software, web site construction, editing, preparation of news releases, organization of publicity events and press conferences, and possess basic photography skills. The Marketing Design Specialist program is different from DCTC's Graphic Design program in that it concentrates on giving the student knowledge of all general marketing concepts along with the concepts of graphic design.

## Nature of Work

Marketing careers offer vast opportunities in promoting for large and small businesses, promotions and marketing departments, telemarketing companies, retail stores, advertising agencies, marketing

firms, market research companies, nonprofit organizations, service industries, web businesses and media-related industries.

## Career Opportunities

Based on the vastness of the marketing profession and the many organizations that employ marketing professionals, students could become inside or outside sales representatives, product development specialists, product line assistant managers, distribution specialists, sales managers, event planners, marketing specialists, marketing assistants, account executives, telemarketing sales specialist, promotions coordinators, direct marketers, e-commerce marketers, customer service representatives, media planners, store assistant managers, advertising reps, marketing account reps or market researchers.

## Program Delivery

Students can begin this program fall or spring semester. Day and online courses are offered. Full- or part-time starts are available. Courses in this program are offered at DCTC's Apple Valley site.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: UW-Stout, UW-River Falls, Metropolitan State University, Bemidji State University, Capella University, College of St. Catherine, Southwest State University, Cardinal Stritch and Saint Mary's University. See Career Services for more information

## Student Outcomes

1. Graduates of the program will be prepared for employment in a variety of areas within the marketing field.
2. Students will understand the essentials of marketing such as advertising, direct marketing, public relations, promotions, sales, research, e-marketing, strategic planning, law and communications.
3. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Business Marketing Specialist A.A.S. Degree

Courses	Cr
ACCT1000 Accounting I	4
MKTC1000 Principles of Marketing	3
MKTC1100 Fundamentals of Sales	3
MKTC1150 Consumer and Professional Buying Behavior	3
MKTC2000 Advertising Practices and Procedures	3
MKTC2010 Advertising Campaign Management	3
MKTC2060 Proposal Writing	1
MKTC2105 Marketing Communications Writing	3
MKTC2215 Marketing Promotions	2
MKTC2310 Public Relations	3
MKTC2410 Marketing Visual Communications	1
MKTC2500 Web Marketing	3
MKTC2550 International Marketing	3
MKTC2600 Marketing Research	3



MKTC2900	Portfolio and Interviewing	1
MKTC2970	Internship	3
SMGT1242	Effective Business Communications	3
VCOM1380	Basic Photography	1
Total		49

#### Technical Electives

Students may select their elective credits from courses in Marketing (MKTC), Supervisory Management (SMGT), or from another program upon approval of the advisor.

Total		3
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#### General Education

These classes are recommended to fulfill the General Education requirements for an A.A.S. degree:

COML1400	Introduction to Computers	3
ECON1100	Microeconomics	3
ENGL1100	Writing and Research Skills	3
SPEE1020	Interpersonal Communication	3
Math/Science Requirement		3
Elective Courses		5

Total		20
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<b>TOTAL Program Requirements</b>		<b>72</b>
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### Marketing Design Specialist A.A.S. Degree

Note: Students can take MKTC2970 in lieu of MKTC2550.

Courses		Cr
MKTC1000	Principles of Marketing	3
MKTC1100	Fundamentals of Sales	3
MKTC1150	Consumer and Professional Buying Behavior	3
MKTC2000	Advertising Practices and Procedures	3
MKTC2010	Advertising Campaign Management	3
MKTC2105	Marketing Communications Writing	3
MKTC2215	Marketing Promotions	2
MKTC2310	Public Relations	3
MKTC2410	Marketing Visual Communications	1
MKTC2500	Web Marketing	3
MKTC2550	International Marketing	3
MKTC2600	Marketing Research	3
MKTC2900	Portfolio and Interviewing	1
VCOM1010	Introduction to Photoshop	2
VCOM1400	Introduction to QuarkXPress	2
VCOM1410	Introduction to Illustrator	2
VCOM1435	Proofreading Fundamentals	1
VCOM1380	Basic Photography	1
VCOM2685	Web Page Construction I	2
Total		50

#### Technical Electives

Students may select their elective credits from courses in Marketing (MKTC), Visual Communications (VCOM), Meeting & Event Management (TRVL) or from another program upon advisor approval.

Total		2
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#### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total		20
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<b>TOTAL Program Requirements</b>		<b>72</b>
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### Marketing Design Specialist Diploma

Courses		Cr
MKTC1000	Principles of Marketing	3
MKTC1100	Fundamentals of Sales	3
MKTC1150	Consumer and Professional Buying Behavior	3
MKTC2000	Advertising Practices and Procedures	3
MKTC2010	Advertising Campaign Management	3
MKTC2215	Marketing Promotions	2
MKTC2310	Public Relations	3
MKTC2410	Marketing Visual Communications	1
MKTC2500	Web Marketing	3
MKTC2600	Marketing Research	3
MKTC2815	Business Law	3
VCOM1010	Introduction to Photoshop	2
VCOM1400	Introduction to QuarkXPress	2
VCOM1410	Introduction to Illustrator	2
VCOM1435	Proofreading Fundamentals	1
VCOM1380	Basic Photography	1
VCOM2685	Web Page Construction I	2
Total		40

#### Technical Electives

Students may select their elective credits from courses in Marketing (MKTC), Visual Communications (VCOM), Meeting & Event Management (TRVL) or from another program upon advisor approval.

Total		4
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#### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total		9
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<b>TOTAL Program Requirements</b>		<b>53</b>
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### Marketing Communications Specialist Certificate

This certificate can be taken fully online (with Internet access)

Courses		Cr
MKTC1000	Principles of Marketing	3
MKTC1100	Fundamentals of Sales	3
MKTC1150	Consumer and Professional Buying Behavior	3
MKTC2000	Advertising Practices and Procedures	3
MKTC2010	Advertising Campaign Management	3
MKTC2215	Marketing Promotions	2
MKTC2310	Public Relations	3
MKTC2410	Marketing Visual Communications	1
MKTC2500	Web Marketing	3
MKTC2600	Marketing Research	3
VCOM1380	Basic Photography	1
Total		28
<b>TOTAL Program Requirements</b>		<b>28</b>

### Sales Specialist Certificate

Courses		Cr
MKTC1000	Principles of Marketing	3
MKTC1100	Fundamentals of Sales	3
MKTC1150	Consumer and Professional Buying Behavior	3
MKTC1200	Professional Sales	3
Total		12
<b>TOTAL Program Requirements</b>		<b>12</b>

# Medical Administrative Assistant

Medical Administrative Assistant/Transcriptionist A.A.S. Degree . . . . .	64 credits
Medical Administrative Assistant Diploma . . . . .	34 credits
Medical Transcriptionist Diploma . . . . .	34 credits
Medical Receptionist Certificate . . . . .	21 credits

## Major Description

**Medical Administrative Assistant:** This major is designed to prepare students to work in a variety of medical-related fields. Specialized medical courses include medical office procedures, medical terminology, anatomy and physiology. Insurance claim processing, insurance coding and medical transcription are covered in medical office procedures class. Students will also complete various courses in communications and become proficient in using current software applications for word processing, spreadsheets and presentation graphics.

**Medical Transcriptionist:** A Medical Transcriptionist is a medical language specialist who interprets and transcribes dictation by physicians and other healthcare professionals about patient assessment, workup, therapeutic procedures, clinical course and other medical processes. Their work documents patient care and facilitates delivery of healthcare services. This type of work requires excellent grammar and punctuation ability in order to edit dictated material for grammar and clarity. Specialized medical courses include medical office procedures, medical terminology, anatomy and physiology and medical transcription.

## Nature of Work

Medical Administrative Assistant – Will serve as administrative assistant in hospitals, clinics, physicians' offices, insurance companies and other medical-related organizations. They perform a number of duties, including composing correspondence, coding diagnoses and procedures, completing insurance forms, controlling doctors' schedules, preparing professional presentations, scheduling patient appointments, maintaining patient files, transcribing reports and many other duties.

Medical Receptionist – The job may include scheduling patient appointments, explaining clinic policy to patients, receiving and delivering messages, processing incoming and outgoing mail, receiving calls from hospital labs and x-ray, taking prescription refill messages, scheduling patient hospital admissions, filing medical reports and insurance forms and maintaining the receptionist area.

Medical Transcriptionist – May transcribe hospital and clinic dictation involving patient chart notes, history and physicals, x-ray reports, consultations, operative reports, pathology reports, autopsies, discharge summaries and a variety of other medical reports. The medical transcriptionist serves as an editor of medical documents with the implementation of voice-recognition software in many healthcare facilities. Careers are found in hospitals, clinics, extended-care facilities, medical research groups, health departments and firms that provide medical transcription services. Transcriptionists may also work from home.

## Career Opportunities

Skilled graduates are needed in every phase of medicine, both in research and private practice. Students find challenging careers in hospitals, clinics and insurance companies. Further education, experience and initiative are qualifications for salary increases and promotions.

## Program Delivery

Students can begin this program fall or spring semester. Courses are offered primarily during day but some evening classes may be available. Full- or part-time starts are available.

## MOS Certification

DCTC offers courses to prepare students for the Microsoft Office Specialist (MOS) certification exam. MOS is the globally recognized standard for validating expertise with the Microsoft Office suite of business productivity software. For more information call 651-423-8428.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Southwest State University and Saint Mary's University. See Career Services for more information.

## Program Prerequisite

A three-minute typing test will be given before students can take OFFC1005 Keyboarding/Formatting. Students must achieve a speed of 35 words per minute with five or fewer errors to be admitted to the course. If students do not type at this level, they must successfully complete Basic Keyboarding prior to registering for OFFC1005 Keyboarding/Formatting.

## Student Outcomes

1. Graduates will be prepared for immediate employment in their respective fields
2. Graduates will have successfully completed coursework in a simulated office environment.
3. Graduates will be able to utilize software applications to produce documents.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Medical Administrative

### Assistant/Transcriptionist A.A.S. Degree

Courses	Cr
OFFC1005 Keyboarding/Formatting	3
OFFC1010 Business English Skills	2
OFFC1030 Word Processing	3
OFFC1045 Medical Terminology	2
OFFC1052 Medical Transcription I	2
OFFC1053 Medical Transcription II	2
OFFC1054 Speech Recognition Transcription	2
OFFC1057 Medical Office Procedures	4
HEAL1101 Anatomy and Physiology	4
<b>Total</b>	<b>24</b>

### Technical Electives

Students may select as an elective any course listed in the Office Careers (OFFC), Computer Careers (COMC), or other program area upon approval of advisor.

<b>Total</b>	<b>20</b>
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### General Education

These classes are recommended to fulfill the General Education requirements for an A.A.S. degree:

ENGL1100 Writing and Research Skills	3
COML1400 Introduction to Computers	3
SPEE1020 Interpersonal Communication	3
PSYC1100 General Psychology	3
Math/Science	3
General Education Electives	5
<b>Total</b>	<b>20</b>
<b>TOTAL Program Requirements</b>	<b>64</b>

## Medical Administrative Assistant Diploma

Courses	Cr
OFFC1005 Keyboarding/Formatting	3
OFFC1010 Business English Skills	2
OFFC1017 Technology for Business Professionals	3
OFFC1030 Word Processing	3
OFFC1040 Integrated Office Skills	3
OFFC1045 Medical Terminology	2
OFFC1057 Medical Office Procedures	4

OFFC1285 Oral Business Comm. and Job Seeking Skills	2
OFFC1290 Written Business Communications	2
HEAL1101 Anatomy and Physiology	4
<b>Total</b>	<b>28</b>

### General Education

The following courses are required:

COML1400 Introduction to Computers	3
SPEE1020 Interpersonal Communication	3
<b>Total</b>	<b>6</b>
<b>TOTAL Program Requirements</b>	<b>34</b>

## Medical Transcriptionist Diploma

Courses	Cr
OFFC1005 Keyboarding/Formatting	3
OFFC1010 Business English Skills	2
OFFC1030 Word Processing	3
OFFC1045 Medical Terminology	2
OFFC1052 Medical Transcription I	2
OFFC1053 Medical Transcription II	2
OFFC1054 Speech Recognition Transcription	2
OFFC1057 Medical Office Procedures	4
OFFC1285 Oral Business Comm. and Job Seeking Skills	2
OFFC1290 Written Business Communications	2
HEAL1101 Anatomy and Physiology	4
<b>Total</b>	<b>28</b>

### General Education

The following courses are required:

COML1400 Introduction to Computers	3
SPEE1020 Interpersonal Communication	3
<b>Total</b>	<b>6</b>
<b>TOTAL Program Requirements</b>	<b>34</b>

## Medical Receptionist Certificate

Courses	Cr
OFFC1000 Basic Keyboarding	1
OFFC1010 Business English Skills	2
OFFC1045 Medical Terminology	2
OFFC1057 Medical Office Procedures	4
OFFC1060 Medical Receptionist Skills	1
OFFC1285 Oral Business Comm. and Job Seeking Skills	2
OFFC1290 Written Business Communications	2
HEAL1101 Anatomy and Physiology	4
<b>Total</b>	<b>18</b>

### General Education

The following course is required:

COML1400 Introduction to Computers	3
<b>Total</b>	<b>3</b>
<b>TOTAL Program Requirements</b>	<b>21</b>

# Medical Assistant

Medical Assistant A.A.S. Degree . . . . .62 credits  
Medical Assistant Diploma . . . . .42 credits

## Major Description

Dakota County Technical College's Medical Assistant Program is accredited by CAAHEP (Commission on Accreditation of Allied Health Education Programs) on recommendation of the Curriculum Review Board of the American Association of Medical Assistants' Endowment (AAMAE). The medical assistant is a professional, multi-skilled person dedicated to assisting in patient care management. This program is a one-year program, including an unpaid seven-week externship in the final semester.

## Nature of Work

The program prepares graduates to assist doctors with examinations and treatments, take medical histories, perform diagnostic tests, sterilize instruments and supplies, assist with minor surgery and administer medications. Office work may include answering phones, making appointments, working with medical records, correspondence and completing insurance forms. The laboratory work may include specimen collection and completing routine lab work done in doctor's offices, like urinalysis, microbiology, blood work, ECG and X-ray.

## Career Opportunities

Graduates assist primary care physicians and specialists in clinics ranging from single physician to large multi-specialty clinics. Opportunities may be available in other health care industries in a variety of areas. This occupation is listed by the U.S. Department of Labor as one of the fastest-growing careers in the United States.

## Program Delivery

Students can begin this program full- or part-time in the fall semester or the spring semester. Courses are offered during the day.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Southwest State University and Saint Mary's University. See Career Services for more information.

## Professional Organizations

The American Association of Medical Assistants has a chapter in Minnesota and a local chapter in the south suburban

area to allow the students to have a professional organization to affiliate with while in school. There is a national certification test that is taken at the completion of the program for the Certified Medical Assistant title.

## Admissions Requirements

Students applying to the Medical Assistant program must meet the requirements identified on the DCTC Admissions Checklist. Students must have a high school diploma or GED to be accepted into the program. This credential is required because of the Clinical Laboratory Improvement Amendment of 1988 (federal law) that states no one can practice in a laboratory without a high school diploma or GED.

## Other Requirements

The student will be required to begin the Hepatitis B vaccination series or sign a declination statement before beginning invasive procedures in the first semester. The student will be required to have a physical exam and show proof of immunization prior to their externship course.

## Course Prerequisites

Students who score below 30% in Reading Comprehension on the Computerized Placement Test (CPT) will be required to take ENGL0123 Medical Reading and Study Skills prior to enrollment in MDAS1130 Clinical Procedures I. This may require part-time status.

Students who score below 30% on arithmetic on the CPT will be required to take MATS0200 Basic Math or MATS0334 Independent Math prior to enrolling or concurrent with HEAL1150 Health Careers Math.

## Student Outcomes

1. Graduates of this program will be prepared for immediate employment in the medical assisting field.
2. Graduates will be able to successfully take and pass the national certification exam.
3. Graduates will be experienced in medical office protocol and this transition will familiarize them with the world of work.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Medical Assistant A.A.S. Degree

Courses	Cr
HEAL1101 Anatomy and Physiology	4
HEAL1150 Health Career Mathematics	1
HEAL1502 Medical Terminology	2
HEAL1701 Pharmacology	2
MDAS1122 Laboratory Skills I	5
MDAS1130 Clinical Procedures I	3
MDAS1140 Phlebotomy	1
MDAS1210 Disease/Medical Treatment & Nutrition	3
MDAS1222 Laboratory Skills II	4
MDAS1230 Clinical Procedures II	3
MDAS1250 Fundamentals of Radiographic Imaging	2
MDAS2970 Externship	6
OFFC1130 MS Word I	2
OFFC1057 Medical Office Procedures	4
<b>Total</b>	<b>42</b>

### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	20
<b>TOTAL Program Requirements</b>	<b>62</b>

## Medical Assistant Diploma

Courses	Cr
HEAL1101 Anatomy and Physiology	4
HEAL1150 Health Career Mathematics	1
HEAL1502 Medical Terminology	2
HEAL1701 Pharmacology	2
MDAS1122 Laboratory Skills I	5
MDAS1130 Clinical Procedures I	3
MDAS1140 Phlebotomy	1
MDAS1210 Disease/Medical Treatment, incl. Nutrition	3
MDAS1222 Laboratory Skills II	4
MDAS1230 Clinical Procedures II	3
MDAS1250 Fundamentals of Radiographic Imaging	2
MDAS2970 Externship	6
OFFC1130 MS Word I	2
OFFC1057 Medical Office Procedures	4
<b>Total</b>	<b>42</b>
<b>TOTAL Program Requirements</b>	<b>42</b>

## 6 Steps to a Successful Start

- Attend a Tuesday Campus Visit.**  
 12:45-2:30 p.m. every Tuesday, no appointment necessary (evening appointments also available)  
**651-423-8020**
- Apply for Admission w/\$20 Fee.**  
 Applications are available on the college web site ([www.dctc.edu](http://www.dctc.edu)) or in Student Services  
**651-423-8302**
- Take the Placement Test.**  
 Call for an appointment. Test can be scheduled the same day you come for Tuesday Campus Visit.  
**651-423-8409**
- Submit Transcripts.**  
 (If you graduated from high school in the last five years, are transferring college credits, have a previous degree, or have a GED certificate)  
**651-423-8302**
- Apply for Financial Aid.**  
 Applications available on [www.fafsa.ed.gov](http://www.fafsa.ed.gov) or in the Office of Scholarships and Financial Aid  
**651-423-8299**
- Register for Classes.**  
 You will then be invited in to a course advising and registration session  
**651-423-8038**

## Why DCTC?

Besides our programs and focus on technology, there are plenty of other great reasons for attending DCTC.

### 94% Job Placement

Year after year, we place more than 94% of our graduates in their field within six months of graduation. And as always, we offer life-time placement assistance to graduates.

### Working with Business

At DCTC, you'll find examples where our partnerships with local, state and national businesses benefit our students. Thanks to the work of our program advisory committees, we maintain active partnerships with more than 500 businesses and industries to ensure that students are receiving the skills employers are seeking, using the latest technology possible.

### Instructors who Live It

Our instructors don't just know this stuff, they live it. Instructors at DCTC have worked extensively in their professions and remain active in the industry. They bring their business and industry experience into their classrooms, shops, labs and studios. And our instructors do more than teach - they advise and mentor students. They make themselves available to students not just for help in coursework, but for help in achieving results, whether that's finding a new job or improving a current one.

### Partners in Education

DCTC has transfer agreements with many colleges and universities. These agreements provide the steps that can help students continue their education toward further certificates, diplomas and degrees. For more information on transfer agreements, visit Career Services.

# Medical Coding Specialist

Medical Coding Specialist Diploma . . . . . 42 credits  
(Program is in partnership with Anoka Technical College (ATC))

## Major Description

This program is designed to provide entry-level personnel that perform abstracting and coding of medical records. Graduates of the program will:

- analyze medical record documentation in order to assign diagnostic and procedural codes
- provide important information for the health care reimbursement process
- assist in medical research and statistics

In addition, the medical coding specialist is knowledgeable in medical terminology, disease processes, anatomy and physiology, and pharmacology.

## Nature of Work

The Medical Coding Specialist major is designed to prepare students to work in a medical setting. Their expertise will be to understand health care procedures and diagnostic procedures, analyze patients' medical records and assign appropriate codes for reimbursement purposes.

## Career Opportunities

Graduates will find employment in any health care/medical setting: clinics, hospitals, or insurance companies.

## Accreditation

The Medical Coding Specialist program is approved by the Council on Accreditation of the American Health Information Management Association.

## Program Delivery

Students can begin this program full- or part-time in the fall semester and part-time only in the spring semester. Courses are offered during the day and online. Students can apply for admissions at DCTC and DCTC will forward all admissions information to Anoka TC for acceptance. Students will have a DCTC identification number and an identification number

from Anoka for course registration purposes. Students applying for financial aid will have to use Anoka Technical College financial aid code. All grants, scholarships and loans are processed by the financial aid staff at Anoka Technical College.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Southwest State University and Saint Mary's University. See Career Services for more information.

## Student Outcomes

1. Graduates will be prepared for immediate employment in the medical coding field.
2. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Medical Coding Specialist Diploma

Courses	Cr
ADSC1040 Applied Medical Terminology	2
ADSC1221 Intro to Health Information Mgmt	3
ADSC1231 ICD-9-CM Coding	3
ADSC1240 Coding & Reimbursement for Physicians'	3
ADSC1244 Legal and Ethical Aspects in Health Care	2
ADSC1249 Advanced Coding and Reimbursement	2
ADSC1252 Professional Practice for Coding Specialist	3
HLTH1000 Disease Conditions	2
HEAL1101 Anatomy and Physiology	4
HEAL1702 Pharmacology Basics	1
OFFC1005 Keyboarding/Formatting	3
OFFC1045 Medical Terminology	2
OFFC1155 MS Excel II	2
<b>Total</b>	<b>32</b>

## Technical Electives

Students may select as an elective any course listed in Office Careers (OFFC) upon approval of advisor.

<b>Total</b>	<b>5</b>
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## General Education

The following courses are required.

COML1400 Introduction to Computers	3
ENGL1100 Writing and Research Skills	3
SPEE1020 Interpersonal Communication	3
<b>Total</b>	<b>9</b>
<b>TOTAL Program Requirements</b>	<b>42</b>

# Meeting & Event Management

Meeting & Event Management Certificate . . . . .16 credits

## Major Description

This comprehensive program combines strategies for success and new tricks of the trade with time-honored practices. Courses provide a solid foundation in meeting and event management skills and knowledge of specializations to spotlight your career. Learn how to find your venue, negotiate it AND manage logistics. Explore methods of promotion, how to manage risks, get sponsors, develop a trade show, take your meeting outside the U.S. and put the “wow” into special events.

## Who Should Participate in This Program?

Interested in a meeting planning career? Just starting out in the field and want to know more? Or, are you experienced and want to learn new tricks, current trends and add this certificate to your resume? Thinking of sitting for the CMP exam? If you said yes to any of these choices, this is the program for you! This course of instruction will be useful to you today and expand your career opportunities for the future. It may even be the opportunity you were looking for to start your own business!

## Nature of Work

The meeting and event manager is responsible for planning and coordinating all of the details that result in meaningful, successful and well-organized conferences, meetings and special events. These responsibilities may be just a part, or the main focus, or the employee’s job description.

## Career Opportunities

In April, 2006, CNN/Money magazine ranked meeting/event planner at 39th on the list of “The 50 Best Jobs in America.” Some of the reason for its ranking is an average income of \$56,000 and projections showing 22% growth in jobs over the next 10 years, statistics well ahead of many more established occupations. As the industry continues to advance its formalization, there is a growing demand for appropriate training and education. Employment opportunities are available in meeting, conference and event management businesses, convention and visitor bureaus, chambers of commerce, offices of tourism, corporations, profit and non-profit organizations, administrative assistance positions, marketing positions, hotels and resorts, restaurants and travel agencies.

## Program Delivery

Courses are offered in a weekend-college format (Friday evenings/all day Saturday) or online. Courses offered in the weekend-college format Fall semester are available online in the Spring and vice-versa. Weekend-college location is DCTC’s Apple Valley site.

## Professional Organizations

Networking is an essential element of success in the meeting and event industry. Students are encouraged to join professional organizations to enhance classroom learning through networking and shared experiences. Organizations such as the Professional Convention Management Association and Meeting Planners International provide excellent opportunities.

## Student Outcomes

1. Graduates will be prepared for employment in the meeting and event industry.
2. Students will have hands-on experience in the field through class projects and work experience.
3. Internships are encouraged and often available with instructor assistance.

## Meeting & Event Management Certificate

Courses	Cr
SMGT1160 Fund. of Meeting, Conference, and Event Mgmt.	2
SMGT1161 Adv. Meeting, Conference, and Event Mgmt.	3
SMGT1162 Special Event Coordination and Mgmt.	3
SMGT1163 Meeting & Event Promotion	3
SMGT1164 Meeting and Event Risk Management	2
SMGT1167 Meeting and Event Sponsorship	3
Total	16
<b>TOTAL</b>	<b>16</b>

\*\* Students may substitute one of the following courses to achieve specialization within the industry; subject to advisor approval.

**SMGT1166 Event Design	3
**SMGT1168 Trade Show Management	3
**SMGT1169 International Meeting Management	3

Individuals can apply the 16 credits earned toward the Supervisory Management A.A.S. degree.

# Nanoscience Technology

Nanoscience Technology A.A.S. Degree . . . . .72 credits

## Major Description

This major prepares students for employment in Minnesota's nanobio/agricultural, nanomaterials and nanoelectronics careers. The program is offered through a partnership with the University of Minnesota. Students will take their first three semesters at DCTC and the final capstone semester at the University of Minnesota in its Nanofabrication Center, Materials Characterization Lab, and Nanoparticles/Biotechnology Labs.

## Nature of Work

The ultra-small scale of nanoscience allows individuals working in the field to apply basic sciences, chemistry, physics and biology to the nanoscience world and enter the job market in a variety of areas. Nanoscience technicians work in research, production, marketing, and business environments where nano scale is a part of the industry.

## Career Opportunities

According to Jack Uldrich and Deb Newberry, authors of the new book, *The Next Big Thing is Really Small*, "The market for nanotechnology in the United States is rapidly growing and projected to reach \$1 trillion by 2010. Growth over this period is expected to produce between 800,000 and two million new technical jobs." Graduates of this program will be prepared for employment in a multitude of industries with positions in business, marketing, research and production.

## Program Delivery

Students can begin general education courses any semester, however the technical courses begin in the fall semester only. Courses are offered during the day. A full-time start is preferred. The fourth semester is offered at the U of M.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: the University of Minnesota– Minneapolis, Southwest State University and Saint Mary's University. See Career Services for more information.

## Student Outcomes

1. Students will have the knowledge to explain basic scientific principles related to the behavior of matter at the atomic level in chemical, biological, and mechanical systems.
2. Students will demonstrate proficiency in operating state-of-the-art nanofabrication equipment.
3. Students will know how to apply the concepts of the nanofabrication process related to advanced electronic and the latest nano-level manufacturing technologies.
4. Students will demonstrate the skills necessary to function as a technician in the field of nanofabrication.
5. Students will demonstrate a thorough understanding of the entire nanofabrication process as it applies to biological, chemical and electronics manufacturing technologies.
6. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Admission Requirements

Applicants to this program must take the Computerized Placement Test (CPT) and achieve a score above the minimum standards in math and reading to be eligible for acceptance into several first semester courses.

## Nanoscience Technology A.A.S. Degree

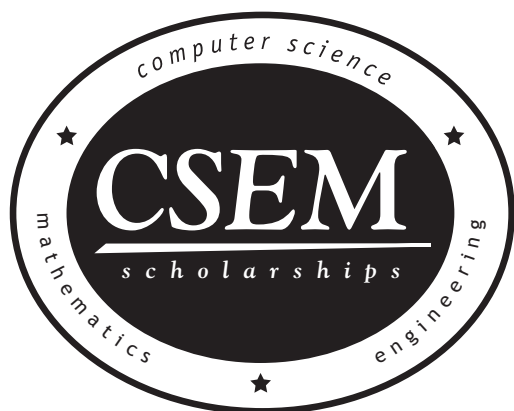
Courses	Cr
NANO1100 Fundamentals of Nanoscience I	3
NANO1200 Fundamentals of Nanoscience II	3
NANO1210 Computer Simulation	1
NANO2101 Nanoelectronics	3
NANO2111 Nanobiotechnology/Agriculture	3
NANO2121 Nanomaterials	3
NANO2131 Manufacturing Quality Assurance	2
NANO2140 Interdisciplinary Lab	3
NANO2151 Career Planning and Industry Tours	1
NANO2970 Industry Internship & Observation	2
Total	24

## Capstone at the University of Minnesota

MT 3111 Elements of Microelectronic Manuf.	3
MT 3112 Elements of Micro & Nano Manuf. Laboratory	1
MT 3121 Thin Films Deposition	3
MT 3131 Introduction to Materials Characterization	3
MT 3132 Materials Characterization Laboratory	1
MT 3141 Principles & Applications of Bionanotechnology	3
MT 3142 Nanoparticles and Biotechnology Laboratory	1
Total	15



<b>General Education</b>		
BIOL1500	General Biology	4
COML1400	Intro to Computers	3
ENGL1100	Writing and Research Skills	3
CHEM1500	Introduction to Chemistry	4
MATS1250	Principles of Statistical Analysis	4
MATS1300	College Algebra	4
PHYS1100	College Physics I	4
PHYS1200	College Physics II	4
SPEE1020	Interpersonal Communication	3
Total		33
<b>TOTAL Program Requirements</b>		<b>72</b>



## Scholarships

CSEM (Computer Science, Engineering, and Mathematics) is a scholarship program funded by the National Science Foundation.\* Students enrolling in the Nanoscience Technology program may be eligible to receive up to \$3,125 per year to help defray the cost of education and living expenses!

For more information on the CSEM scholarship program, or to see if you qualify, contact Financial Aid at 651-423-8299.



*\*This material is based upon work supported by the National Science Foundation under Grant No. 0324062 [for the CSEMS grant]*

*\*Any opinions, findings, and conclusions, or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.*

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# Nursing Assistant/Home Health Aide

Nursing Asst./Home Health Aide Transcript . . . . .5 credits

## Major Description

This course prepares individuals to assist others with personal care needs. These populations include dependent elderly, home care clients and hospital patients.

## Nature of Work

The nursing assistant/registered (NA/R) and/or home health aide (HHA) provides care under the direct supervision of licensed nurses. Employment is primarily in long-term care facilities, home health agencies and hospitals.

## Career Opportunities

The demand for NA/Rs continues to grow due to the country's aging population. Expanding home care opportunities include working with populations ranging in age from infancy to elderly. The NA/R position is the first step in nursing career mobility. The course is a prerequisite for the Practical Nursing program and for many Registered Nurse programs.

## Program Delivery

Students can take this course in the fall or spring semester or during summer session. The course is offered in a morning into afternoon or afternoon into evening format.

## Program Approval

The program is approved by the Minnesota Department of Health (MDH). Students completing the course are eligible to take the MDH Competency test for nursing assistants which is offered at the college. Successful candidates are placed on the State Nursing Assistant Registry

## Nursing Assistant /Home Health Aid Transcript

Courses	Cr
HEAL1055 Nursing Assistant/Home Health Aide	5
TOTAL	5
TOTAL Requirements	5

# Why DCTC?

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## 94% Job Placement

Year after year, we place more than 94% of our graduates in their field within six months of graduation. And as always, we offer life-time placement assistance to graduates.

## Working with Business

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## Instructors who Live It

Our instructors don't just know this stuff, they live it. Instructors at DCTC have worked extensively in their professions and remain active in the industry. They bring their business and industry experience into their classrooms, shops, labs and studios. And our instructors do more than teach - they advise and mentor students. They make themselves available to students not just for help in coursework, but for help in achieving results, whether that's finding a new job or improving a current one.

## Partners in Education

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# Photography Imaging Technology

Photographic Imaging Technology A.A.S. Degree .....	64 credits
Photographic Imaging Technology Diploma .....	32 credits
Digital Imaging Technician Certificate .....	24 credits
Photographer Assistant Certificate .....	18 credits

## Major Description

Students in Photographic Imaging Technology use their creative abilities to set up and take the unique photograph, process the film, and produce the professional quality display print. The Photographic Technology major is designed to provide skills in photography, film and paper processing, quality control, professional printing and digital imaging techniques. Students learn in a facility equipped with various types of studio equipment and in a well-equipped lab that replicates the industry. This highly artistic and technical industry requires both training and experience to produce the results that consumers demand.

## Nature of Work

The wide variety of careers in this industry allows students to use their creative ability, technical expertise and equipment knowledge, as well as their eye for details to become successful in the field of their choice. Good skills in traditional photography and processing are paving the way into careers in electronic imaging as many photo companies diversify into other technologies. Graduates have become photographers of all types, darkroom and custom printers, and chemical and equipment specialists, as well as service and sales representatives for larger companies.

## Career Opportunities

As the industry begins to move toward electronic imaging, equipment will become more sophisticated and will require better trained personnel. Opportunities in the new areas of imaging, as well as the traditional areas continue to grow as technology provides both amateur and commercial customers a larger variety of products and services. Knowledgeable and well-trained people are in demand by companies in the metro area and across the country.

## Program Delivery

Students can begin this program in the fall semester only. Courses are offered primarily during the day, however, some courses are made available in the evening. Full- or part-time starts are available.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Bemidji State University, Metropolitan State University, Minnesota State University Moorhead, Southwest State University and Saint Mary's University. See Career Services for more information.

## Student Outcomes

1. Graduates completing the Photographic Imaging Technology program are prepared for employment in photographic imaging technology industries.
2. Students will gain a variety of traditional and digital technical skills (photography, film and paper processing, quality control, professional printing, and computer and software operation) to enable them to make well-informed career decisions within the photographic technology industry.
3. Students will be provided a blend of traditional and advanced imaging technology to enable them to keep pace with future industry development.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Photographic Imaging Technology

### A.A.S. Degree

Courses	Cr
VCOM1001 Introduction to Visual Communications	2
VCOM1006 Color Theory	2
VCOM1010 Introduction to Photoshop	2
VCOM1021 Introduction to Photography	3
VCOM1345 Audio Visual Presentations	3
VCOM1400 Introduction to QuarkXPress	2
VCOM1515 Photo Lighting Techniques	2
VCOM1525 Basic Darkroom Techniques	4
VCOM1565 Color Printing Systems	4
VCOM1570 Portrait Photography	2
VCOM1580 Introduction to Digital Imaging	2
VCOM2000 VisCom Career/Portfolio Development	2
VCOM2510 Commercial Photography	2
VCOM2520 Digital Photography	2
VCOM2551 Digital Studio Workflow I	2
VCOM2552 Digital Studio Workflow II	2
VCOM2580 Portfolio Development (Photo Careers)	2
Total	40

### Technical Electives

Students may select their elective credit from a course in Visual Communication curricula with the approval of the advisor.

Total 4

### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total 20

**Total Program Requirements 64**

### Photographic Imaging Technology Diploma

Courses	Cr
VCOM1001 Introduction to Visual Communications	2
VCOM1010 Introduction to Photoshop	2
VCOM1021 Introduction to Photography	3
VCOM1515 Photo Lighting Techniques	2
VCOM1525 Basic Darkroom Techniques	4
VCOM1565 Color Printing Systems	4
VCOM1570 Portrait Photographer	2
VCOM1580 Introduction to Digital Imaging	2
VCOM2000 VisCom Career/Portfolio Development	2
VCOM2580 Portfolio Development (Photo Careers)	2
<b>Total</b>	<b>25</b>

### Technical Electives

Students may select their elective credit from a course in Visual Communication curricula with the approval of the advisor.

Total 4

### General Education

Select one of the following courses:

COML1400 Introduction to Computers	3
ENGL1100 Writing and Research Skills	3
SPEE1020 Interpersonal Communication	3
<b>Total</b>	<b>3</b>

**TOTAL Program Requirements 32**

### Digital Imaging Technician Certificate

Courses	Cr
VCOM1001 Introduction to Visual Communications	2
VCOM1010 Introduction to Photoshop	2
VCOM1021 Introduction to Photography	3
VCOM1345 Audio Visual Presentations	3
VCOM1400 Introduction to QuarkXPress	2
VCOM1410 Introduction to Illustrator	2
VCOM1580 Introduction to Digital Imaging	2
VCOM2520 Digital Photography	2
VCOM2551 Digital Studio Workflow I	2
VCOM2580 Portfolio Development (Photo Careers)	2
<b>Total</b>	<b>22</b>

### Technical Electives

Students may select their elective credits from courses in Visual Communication curricula with the approval of the advisor.

Total 2

**TOTAL Program Requirements 24**

### Photographer Assistant Certificate

Courses	Cr
VCOM1010 Introduction to Photoshop	2
VCOM1021 Introduction to Photography	3
VCOM1360 Photography Workshop	1
VCOM1515 Photo Lighting Techniques	2
VCOM1570 Portrait Photography	2
VCOM2510 Commercial Photography	2
VCOM2520 Digital Photography	2
VCOM2540 The Business of Photography	2
VCOM2580 Portfolio Development (Photo Careers)	2
<b>Total</b>	<b>18</b>

**TOTAL Program Requirements 18**

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# Photography

Photography A.S. Degree .....64 credits

## Major Description

The Photography A.S. Degree at Dakota County Technical College combines the art, science and business of photography into a dynamic program aimed at helping students achieve one of three broad goals: 1) acceptance to four year college; 2) starting their own photography business; or 3) entering a specific sector of the visual communications workplace. All students will complete a technical core curriculum and a general education curriculum. Students will choose a Photography emphasis area (major) and then complete photography studies in one of the specialized area

## Nature of Work

Photographers work in a multitude of industry-specific niches. Some specialize in photographing people, while others work only with products. Some work in very artistic settings, while others work in very technical and scientific arenas. Some work for small and large businesses, while others are self employed. This program gives students the technical core necessary to begin studies in their chosen sector of the photographic marketplace.

## Career Opportunities

After graduation, students may choose to seek further education (four-year college), self-employment or many career options. Some photography options area are in historical photography/preservation, advertising, aerial, crime scene, commercial, editorial, fashion, fine art, forensic, medical, photo chemistry, photojournalism, portraits, scientific and stock photography.

## Program Delivery

Students can begin this program in the fall semester only. Courses are offered primarily during the day, however, some courses are made available in the evening. Full- or part-time starts are available.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Bemidji State University, Metropolitan State University, Minnesota State University Moorhead, Southwest State University and Saint Mary's University. See Career Services for more information.

## Student Outcomes

1. Graduates of the program will be prepared for entry to a four-year college, self employment and entry into the visual communications field.
2. Students will have hands on experience with traditional and digital photographic equipment.
3. Students will display the professional and ethical standards applied within the photographic industry.
4. Students will gain knowledge of the business, art, and science of photography
5. Students will gain knowledge of the business, art, and science of photography.
6. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Photography A.S. Degree

Courses	Cr
VCOM1010 Introduction to Photoshop	2
VCOM1021 Introduction to Photography	3
VCOM1025 Law and Ethics for VisCom	1
VCOM1515 Photo Lighting Techniques	2
VCOM1570 Portrait Photography	2
VCOM1580 Introduction to Digital Imaging	2
VCOM2000 VisCom Career/Portfolio Development	2
VCOM2510 Commercial Photography	2
VCOM2520 Digital Photography	2
VCOM2975 VisCom Production Lab	2
<b>Total</b>	<b>20</b>

## Technical Electives

Students may select their electives from a course in Business Entrepreneur, Visual Communications curricula with advisor approval.

<b>Total</b>	<b>14</b>
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## General Education

The following courses are required:

ARTS1000	Visual Communication	3
ARTS1100	History of Photography	3
ARTS1200	The Creative Process	3
COML1400	Introduction to Computers	3
ENGL1100	Writing and Research Skills	3
SPEE1020	Interpersonal Communications	3
Math or Science course		3
Total		21

## General Education Electives

See the General Education section of this college catalog.

Courses must be selected from at least two of the following MnTC Goal Areas (2, 5, 7, 8, 9, and 10). Courses from Goal 3 or 4 may be taken if not selected to meet the requirements above.

Total	9
TOTAL Program Requirements	64

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# Practical Nursing

Practical Nursing Diploma . . . . .56 credits

## Major Description

The Practical Nursing Program prepares graduates to administer safe, ethical, multi-skilled, client-focused nursing care in traditional and alternative health care settings. The LPN role in the nursing process is used in classroom learning, in simulated client care, and in instructor-supervised experiences in the health care setting. This is a two-year program. Taking summer courses may decrease semester credit load as well as program length.

## Nature of Work

Licensed practical nurses (LPNs) provide direct client care under the supervision of a Registered Nurse (RN), Advanced Practice Nurse (APN), Physician's Assistant (PA) or Physician (MD). Potential employers include hospitals, long-term care facilities, health care clinics, schools, home health agencies and homes for special populations.

## Career Opportunities

Opportunities for LPN's in health care are continually expanding. Employment may be obtained in government and private health care settings. Advancement within a work setting may occur with experience.

Graduates may choose to pursue an associate degree (ADN) in professional nursing through a community college or a baccalaureate degree (BSN) through a university. Articulation/mobility plans are in place at colleges and universities in the state of Minnesota. Faculty advisors are available to assist students with this process.

## Program Delivery

Students can begin this program fall or spring semester. Courses are offered during the day. Full- or part-time starts are available.

## Program Approval

The program is approved by the Minnesota Board of Nursing, 2829 University Avenue SE #500, Minneapolis, MN 55414, (612) 617-2270. Graduates are eligible to apply to take the licensing examination administered by the National Council of State Boards of Nursing.

## Professional Organization

The National Federation of Licensed Practical Nurses, Inc. (NFLPN) is the professional organization for licensed practical nurses and licensed vocational nurses and practical/vocational nursing students in the US and Canada.

NFLPN serves as the central source of information on what is new and changing in practical/vocational nursing education and practiced at the local, state and national levels. Students will be given membership information for the NFLPN.

## Admissions Requirements

The admissions process for Practical Nursing is done in two stages. **Stage one:** Students must complete all of the DCTC admissions requirements and supply proof of high school diploma or GED for acceptance into the Pre-Nursing program. The Pre-Nursing program allows students to enroll in prerequisite courses (Nursing Assistant, Medical Terminology, CPR for the Professional Rescuer, Advanced First Aid), developmental courses (if needed, based on placement test scores in reading, sentence skills and arithmetic), and general education requirements (see the list of courses on pg. 54). **Stage two:** Once the prerequisite courses, developmental courses, and at least 11-12 general education credits are completed, students are eligible to apply to the Practical Nursing program and its core courses.

## Student Outcomes

1. Graduates of the Practical Nursing program will be prepared for employment as licensed practical nurses.
2. Graduates will be prepared to pass the NCLEX-PN.
3. Graduates will demonstrate the knowledge, skills, and behaviors essential for successful practical nursing.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Practical Nursing Diploma

Courses	Cr
HEAL1101 Anatomy and Physiology	4
HEAL1150 Health Careers Math	1
HEAL1400 Nutrition and Diet Therapy	2
HEAL1701 Pharmacology	2
PNSG1000 Foundations of Nursing Practice I	2

PNSG1100	Foundations of Nursing Practice II	2
PNSG1400	Adult Health Nursing I	4
PNSG1500	Adult Health Nursing II	3
PNSG1530	Beginning Clinical	3
PNSG1540	Clinical Practice I	2
PNSG1560	Clinical Practice II	3
PNSG1570	Clinical Practice III	2
PNSG1580	Clinical Practice IV	3
PNSG1800	Family and Community Nursing	3
Total		36

### General Education

The following courses are required:

COML1400	Introduction to Computers	3
ENGL1100	Writing and Research Skills	3
SPEE1020	Interpersonal Communication	3
PSYC1100	General Psychology	3
PSYC1200	Abnormal Psychology	3
PSYC1300	Child and Adolescent Psychology	3
PSYC1400	Adult and Geriatric Psychology	2
Total		20
<b>TOTAL Program Requirements</b>		<b>56</b>

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# Supervisory Management

Supervisory Management A.A.S. Degree . . . . .	64 credits
Supervisory Leadership Certificate . . . . .	17 credits
Human Resource Development Certificate . . . . .	17 credits
Quality Improvement Certificate . . . . .	16 credits
Business Entrepreneur Certificate . . . . .	18 credits
Meeting and Event Management Certificate . . . . .	16 credits

## Major Description

The Supervisory Management major is designed to provide working adults with the skills and knowledge necessary to succeed in today's business environment. Skills learned are universal and can be applied to business entrepreneurship or any type of organization, including manufacturing, event hospitality, retail, health services and other profit and non-profit organizations. Build on our Leadership certificate by individualizing the degree based on your career goals. Choose your emphasis with a certificate in Business Entrepreneur, Human Resources, Quality Improvement or Meeting and Event Management.

## Career Opportunities

The Supervisory Management major provides training to help individuals perform successfully in most of the public and private sector in positions such as team leader, supervisor, manager, entrepreneur or event and meeting manager.

## Program Delivery

Students can begin this program fall or spring semester. Day, evening, weekend and on-line courses are offered. Full- or part-time starts are available. Courses in this program are offered at DCTC's Apple Valley site.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Southwest Minnesota State University, Cardinal Stritch and Saint Mary's University. See Career Services for more information.

## Advanced Standing

Previous college courses, certification, licensure and training may be considered for credit in the major. The responsibility for seeking credit rests with the student and can be initiated by completing the course SMGT2950 Prior Experiential Learning Portfolio Development (1 elective credit).

## Graduation Planning

Most courses are offered in an accelerated format that reduces classroom time and increases outside class activities. Accelerated courses are highly interactive and are offered at consistent times to accommodate working adults.

Graduate in as little as two years by attending part-time, one night a week, year-round. Courses are sequenced to allow graduation for the certificate programs in approximately five months.

General education courses are not included in the accelerated format and are, therefore, not included in the sequence of courses. General education courses need to be taken concurrent with the program courses in order to graduate in two years.

Some courses may be offered online. Courses may have approved substitutions. Contact the program advisor for details.

## Student Outcomes

1. Graduates of this program will be prepared for employment at a supervisory level.
2. Students will demonstrate leadership skills to achieve a productive work environment.
3. Students will demonstrate effective interpersonal communication skills.
4. Students will demonstrate analytical skills in identifying and solving problems.
5. Graduates will demonstrate knowledge and skills from their individualized emphasis areas.
6. Students will demonstrate their overall understanding of the degree through completion of the graduation project (capstone).
7. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Supervisory Management A.A.S. Degree

Courses	Cr
SMGT1000 Principles of Supervision	3
SMGT1022 Leadership	3
SMGT1028 Management Effectiveness	3
SMGT1601 Financial Management *	2
SMGT1776 Organizational Behavior	3
Total	14

### Graduation Project

Graduation Project must have advisor approval and registration in the last semester of attendance. Credits are variable, based on project scope. Substitutions may be offered by another program. See advisor for details.

Total	1-6
-------	-----

### Technical Emphasis

Choose two of the following emphasis area certificates:

Quality Improvement Certificate	16
Human Resource Development Certificate	17
Business Entrepreneur Certificate	18
Meeting and Event Management Certificate	16

### Technical Electives

Students may select as an elective any course from the Supervisory Management (SMGT), Accounting Careers (ACCT), Business Entrepreneur (ENTR), Marketing (MKTC), or Office (OFFC) programs with approval of the advisor.

Total	1-5
-------	-----

### General Education

See the General Education section on [www.dctc.edu](http://www.dctc.edu).

Total	20
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<b>TOTAL Program Requirements</b>	<b>64</b>
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## Supervisory Leadership Certificate

Courses	Cr
SMGT1000 Principles of Supervision	3
SMGT1022 Leadership	3
SMGT1028 Management Effectiveness	3
SMGT1601* Financial Management	2
SMGT1776 Organizational Behavior	3
Total	14

### General Education

COML1400 Introduction to Computers	3
------------------------------------	---

Total	3
-------	---

<b>TOTAL Program Requirements</b>	<b>17</b>
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## Human Resource Development Certificate

Courses	Cr
SMGT1033 Business Law & Ethics	3
SMGT1405 Managing Performance	3
SMGT1441 Intro to Human Resource Management	3
SMGT1470 Safety and Compliance Management	2
SMGT1875 Training and Developing Employees	3
Total	14

### General Education

SPEE1020 Interpersonal Communication	3
--------------------------------------	---

Total	3
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<b>TOTAL Program Requirements</b>	<b>17</b>
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## Quality Improvement Certificate

Courses	Cr
SMGT1205 Total Quality Management	4
SMGT1260 Managing Teams	3
SMGT1242 Effective Business Communications	3
SMGT1231 Planning and Project Management	2
SMGT1250* Managing Customer Service	1
Total	13

### General Education

ENGL1100 Writing and Research Skills	3
--------------------------------------	---

Total	3
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<b>TOTAL Program Requirements</b>	<b>16</b>
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## Business Entrepreneur Certificate

Courses	Cr
ENTR1150 The Successful Entrepreneur	2
ENTR1430 Marketing Strategies for Small Business	2
ENTR1650 Selling Success for the Entrepreneur	3
ENTR1860 Business Plan Development	3
ENTR1900 Capitalizing a Small Business	2
OFFC1240 Quick Books I (or SMGT1601 Financial Mgmt.)	2
SMGT1033 Business Law and Ethics	3
SMGT1250 Managing Customer Service	1

Total	18
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<b>TOTAL Program Requirements</b>	<b>18</b>
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## Meeting and Event Management Certificate

(Pending MnSCU Board approval)

Courses	Cr
SMGT1160 Fund. of Meeting, Conference, and Event Mgmt.	2
SMGT1161 Adv. Meeting, Conference, and Event Mgmt.	3
SMGT1162 Special Event Coordination and Mgmt.	3
SMGT1163 Event Promotion	3
SMGT1164 Meeting and Event Risk Management	2
SMGT1167 Meeting and Event Sponsorship	3

Total	16
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<b>TOTAL Program Requirements</b>	<b>16</b>
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# Travel and Tourism

Travel and Tourism Certificate . . . . .16 credits

## Major Description

This program focuses on the products/services most profitable and fun to book, such as cruises and tours. Travel professionals provide clients with dream vacations instead of the travel nightmares that likely occur by booking travel via the Internet. In this program, you will learn about travel resources that are NOT available to the general public and learn how to assess clients' needs and match them with products, services and destinations that will assure a pleasurable travel experience at the best value. Students will be provided with practical, hands-on experience, the opportunity to book live reservations for clients and access to the Worldspan reservation system from home via the Internet. A travel industry internship is also included.

## Nature of Work

Through access to products and resources not available to the general public, travel agents are able to provide clients with the best value for both business and leisure travel. Travel agents take pride in their knowledge and understanding of travel products and destinations and their ability to determine clients' needs. According to ASTA (American Society of Travel Agents), the best thing a travel agent can do is to match up a traveler with the vacation that's right for them. A good travel agent can usually save clients money and assure not just a pleasurable worry-free travel experience, but the trip of a lifetime.

## Career Opportunities

Travel and Tourism is the largest industry in the world! Graduates will find full-time, part-time and seasonal work in offices, as well as working out of home. Positions are available with corporate and leisure travel agencies, host travel agencies for independent contractors, tour operators, wholesalers, airline consolidators, car rental companies and hotels/motels/resorts.

## Program Delivery

This certificate program begins in the fall semester. Courses are offered primarily during the day. Students should enroll full-time, however part-time starts are available with instructor approval. Courses in this program are offered at DCTC's Apple Valley site.

## Professional Organizations

Students are encouraged to join professional organizations such as the American Society of Travel Agents' (ASTA) Future Travel Professionals Club and Travel Industry Professionals (TIP) organization. Students also are encouraged to attend the regular seminars by the Upper Midwest Chapter of ASTA.

This program is an official test site for the national TAP (Travel Agency Proficiency) test. This test was developed by The Travel Institute (formerly ICTA) and ASTA to provide a national standard of for the travel industry.

## Student Outcomes

1. Graduates completing the program will be prepared for employment in the travel industry.
2. Students will successfully manage the Worldspan Computer Reservation System.
3. Students will have hands-on experience in the field through work experience, building reservation records and performing sales presentations.
4. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Travel and Tourism Certificate

Courses	Cr
TRVL1011 Travel Technology	5
TRVL1020 Travel Geography	3
TRVL1035 Travel and Tourism Products and Services	5
TRVL1056 Sales, Marketing, and Professional Dev.	3
Total	16
<b>TOTAL Program Requirements</b>	<b>16</b>

# Truck Driver Training

Truck Driver Training Certificate . . . . .16 credits  
 Truck Driver Training Fast-Track Certificate . . . . .16 credits

## Major Description

The Truck Driver Training major is designed to provide students with the knowledge and skills needed to enter the trucking industry. Students become familiar with the safe operation of all types of trucks, from two-axle vans to five-axle tractor-trailer units. Students learn the regulations of the Department of Transportation (DOT). Other areas of study include pre- and post-trip inspections, hooking and dropping a tractor-trailer, and the basics of shifting and driving. Dakota County Technical College has a large truck directional skills area on campus where students can learn to start, stop, park, back up and maneuver the big vehicles. Defensive driving is also taught. Before completing the major, students must successfully complete the Commercial Driver's License (CDL) road test.

*Note: The Truck Driver Training program is at a higher tuition/fee rate than other DCTC programs (approx. cost \$4600)*

## Nature of Work

Professional drivers are responsible for managing freight shipments from pick-up to delivery. They will perform vehicle inspections and may be responsible for some loading and unloading.

## Career Opportunities

Excellent opportunities exist with local cartage companies, private carriers, construction companies, intra-state truck companies, interstate common carriers, and contract long-haul carriers.

## Program Delivery

**Traditional Certificate:** This 16-week evening program begins 4 times a year, and is offered Monday through Thursday 5-10 p.m. and Friday 5-9 p.m.

**Fast-Track Certificate:** This 8-week day program begins about 10 times per year, and is offered Monday through Friday, 7 a.m.-3:30 p.m. It consists of 8 weeks of hands-on field experiences and classroom activities plus 8 weeks of paid internship. After the first 8 weeks, students are qualified to seek a permanent, full-time job, where the first 8 weeks of employment will fulfill the requirements of the internship.

## Admissions Requirements

In addition to the admissions requirements listed on the Admissions Checklist, applicants to this program must supply/pass the following:

- Department of Transportation (DOT) physical examination form
- Motor vehicle record (MVR) – significant violations will result in ineligibility based on industry standards
- Class A learner's permit obtained by taking written test
- A DOT mandated Drug and Alcohol Screening test will be administered during the first week of classes, and the students will be placed in a random drug pool.

## Student Outcomes

1. Graduates of this program will be prepared for entry-level employment in the truck driving industry.
2. Students will become familiar with the safe operation of tractor-trailer combination vehicles.
3. Students will have knowledge of regulations of state and federal Departments of Transportation (DOT).

## Truck Driver Training Certificate

Courses	Cr
TDTG1100 Basic Operation and Vehicle Systems	4
TDTG1103 Basic Vehicle Control	4
TDTG1112 Advanced Driving	4
TDTG1115 Industry Operations	4
Total	16
<b>TOTAL Program Requirements</b>	<b>16</b>

## Truck Driver Training Fast-Track Certificate

Courses	Cr
TDTG1810 Tractor-Trailer Operations and Systems	6
TDTG1820 Tractor-Trailer Control	6
TDTG2970 Internship	4
Total	16
<b>TOTAL Program Requirements</b>	<b>16</b>

# Welding Technology

Welding Technology Diploma . . . . .32 credits

## Major Description

The Welding Technology major is designed to provide training in many areas of the welding trades. Subjects covered include electric arc, wire feed, heliarc welding, oxyacetylene welding and various flame cutting processes. Students work with a wide variety of metals, including steel, stainless steel, aluminum, and cast iron. Shop fabrication, math, and blueprint reading are also covered. Welders already in the field can update their knowledge by registering for specific major courses

## Nature of Work

The welder will interpret prints and lay out, fit, and weld components to assemble products. Knowledge of the physical properties of metal, effects of heat, allowance of machining, weld shrinkage and welding techniques is essential. Materials welded will vary from sheet metal to heavy plate, carbon steel to aluminum. Welding processes used are oxyacetylene, arc, wire feed, heliarc, and fluxcore arc welding.

## Career Opportunities

There is a need for workers with the ability to fabricate/weld metal products from blueprints. Jobs are available as welders' helpers, welders, supervisors, welding technicians, sales representatives, and shop owners. Most industries use welding in one form or another. Industry examples include heavy construction, heavy fabrication (such as tanks and machinery), transportation units, packaging, material conveyance, and electronics, as well as precision sheet metal and repair.

## Program Delivery

Students can begin this program in the fall semester only. Courses are offered during the day. A full-time start is preferred.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Bemidji State University and Cardinal Stritch. See Career Services for more information.

## Student Outcomes

1. Graduates completing the program will be prepared for entry level employment in the welding industry and related areas.
2. Students will develop skills in welding processes: oxy-acetylene, wirefeed, heliarc, and fluxcore arc welding.
3. See General Education section on [www.dctc.edu](http://www.dctc.edu) for general education outcomes statement.

## Welding Technology Diploma

Courses	Cr
WELD1100 Welding Safety and Theory	2
WELD1102 Shielded Metal Arc Welding I	4
WELD1104 Semi-Automatic Arc Welding I	3
WELD1106 Gas Tungsten Arc Welding I	3
WELD1108 Blueprint Reading	3
WELD1110 Layout	3
WELD1112 Welding Fabrication/Qualification	3
WELD1114 Shielded Metal Arc Welding II	4
WELD1116 Semi-Automatic Arc Welding II	2
WELD1118 Gas Tungsten Arc Welding II	2
Total	29

## General Education

Students may select one course from the following:

COML1400 Introduction to Computers	3
ENGL1100 Writing and Research Skills	3
ENGL1102 Technical Written Communications	3
SPEE1020 Interpersonal Communication	3
Total	3
<b>TOTAL Program Requirements</b>	<b>32</b>

# Wood Finishing Technology

Wood Finishing Technology Diploma . . . . .36 credits  
Furniture Service Technician Certificate . . . . .19 credits

## Major Description

The world of the wood finisher is a blend of the past, present and future. Students can specialize in many different areas where their skills will allow the past to continue or be creative with today's new materials and techniques.

## Nature of Work

Skilled finishers of wood can use their talents in many different aspects within the wood finishing trade. One major area would be a furniture restoration specialist. This person is someone who can totally refinish or refurbish older furniture, considering the heritage and integrity of the furniture. This includes everything from repairing or replacing wooden parts to repairing or replacing the finish itself.

Another area of specialty is that of a commercial finishing technician. This uses today's modern finishes and techniques on new furniture construction. Being able to create beautiful finishes and match new colors on furniture and millwork is of great value to today's wood finishing industry.

Within both of these specialties lies another profession, a spot repair artist called a furniture service technician, who can creatively disguise those unavoidable small damages, such as nicks, dents and scratches. This technician can take care of damages that can be repaired at the production site, in the warehouse being prepared for delivery or at the site of location where the furniture has been delivered. Upholstery repair and vinyl repairs are also taught to accommodate other repairs needed to be a furniture service technician or a furniture restoration specialist.

## Career Opportunities

Skilled furniture restorers will work for or start their own furniture refinishing shops. They may also specialize in the restoration of antique furniture, clocks, radios and other items. Commercial finishing technicians will find employment with any furniture manufacturer. Their responsibilities include color matching, surface preparation, color application, sealing, top-coating and rubbing out the finish. A furniture service technician can work independently with the

general public, furniture stores, furniture manufacturers or setting up contract maintenance agreements with business offices. Furniture service technicians can also work in-house for a furniture store using their skills repairing nicks, dents, and scratches on furniture before it is sold.

## Program Delivery

Students begin this program in the fall semester. Courses are offered during the day. A full-time start is preferred.

## After DCTC

DCTC has transfer agreements for this program with the following colleges: Bemidji State University and the University of Minnesota–Crookston. See Career Services for more information.

## Student Outcomes

1. Graduates completing the Wood Finishing Technology program will be prepared for employment in many segments of the wood finishing industry.
2. Students will develop critical thinking and problem-solving skills.
3. Students will have hands-on training in almost all aspects of wood finishing.

## Wood Finishing Technology Diploma

Courses	Cr
WOOD1001 Wood Technology	2
WOOD1004 Woodworking	3
WOOD1007 Methods of Fastening	3
WOOD1009 Selection and Application of Finishes	3
WOOD1012 Color Theory	3
WOOD1015 Spot Repair I	3
WOOD1019 Spot Repair II	5
WOOD1021 Wood Refinishing	6
WOOD1026 Advanced Finishing Techniques	5
WOOD1032 Antique Furniture Conservation	3
Total	36
<b>TOTAL Program Requirements</b>	<b>36</b>

## Furniture Service Technician Certificate

Courses	Cr
WOOD1001 Wood Technology	2
WOOD1009 Selection and Application of Finishes	3
WOOD1012 Color Theory	3
WOOD1015 Spot Repair I	3
WOOD1019 Spot Repair II	5
WOOD1032 Antique Furniture Conservation	3
Total	19
<b>TOTAL Program Requirements</b>	<b>19</b>

## 6 Steps to a Successful Start

- Attend a Tuesday Campus Visit.**  
12:45-2:30 p.m. every Tuesday, no appointment necessary (evening appointments also available)  
**651-423-8020**
- Apply for Admission w/\$20 Fee.**  
Applications are available on the college web site ([www.dctc.edu](http://www.dctc.edu)) or in Student Services  
**651-423-8302**
- Take the Placement Test.**  
Call for an appointment. Test can be scheduled the same day you come for Tuesday Campus Visit.  
**651-423-8409**
- Submit Transcripts.**  
(If you graduated from high school in the last five years, are transferring college credits, have a previous degree, or have a GED certificate)  
**651-423-8302**
- Apply for Financial Aid.**  
Applications available on [www.fafsa.ed.gov](http://www.fafsa.ed.gov) or in the Office of Scholarships and Financial Aid  
**651-423-8299**
- Register for Classes.**  
You will then be invited in to a course advising and registration session  
**651-423-8038**

## Why DCTC?

Besides our programs and focus on technology, there are plenty of other great reasons for attending DCTC.

### 94% Job Placement

Year after year, we place more than 94% of our graduates in their field within six months of graduation. And as always, we offer life-time placement assistance to graduates.

### Working with Business

At DCTC, you'll find examples where our partnerships with local, state and national businesses benefit our students. Thanks to the work of our program advisory committees, we maintain active partnerships with more than 500 businesses and industries to ensure that students are receiving the skills employers are seeking, using the latest technology possible.

### Instructors who Live It

Our instructors don't just know this stuff, they live it. Instructors at DCTC have worked extensively in their professions and remain active in the industry. They bring their business and industry experience into their classrooms, shops, labs and studios. And our instructors do more than teach - they advise and mentor students. They make themselves available to students not just for help in coursework, but for help in achieving results, whether that's finding a new job or improving a current one.

### Partners in Education

DCTC has transfer agreements with many colleges and universities. These agreements provide the steps that can help students continue their education toward further certificates, diplomas and degrees. For more information on transfer agreements, visit Career Services.