

**One-Year Programs**

**Certificate of Proficiency**

- Automotive Technology
- Business Management (Office Operations Management)
- Commercial Art and Design (Graphic Design)
- Computer - Aided Drafting (CAD)
- Computer - Aided Manufacturing (CAM)
- Computer Maintenance Technology
- Dental Assisting
- Early Childhood Education (Infant/Toddler)
- Environmental Health & Safety Technology
- Food & Beverage Operations
- Information Technology (Information Application Specialist)
- Lodging Room Division
- Machine Tools
- Medical Assisting
- Mortgage Finance
- Optical Technology
- Pharmacy Technician
- Plant Science and Landscape Technology (Landscape Technician)
- Polysomnography
- Practical Nursing
- Precision Machining Technology
- Professional Baking
- Professional Culinarian/Cook
- Sterile Processing & Distribution Technology

**Post Degree Professional Certificate**

- Diagnostic Medical Sonography
- Legal Nurse Consultant
- Massotherapy (General Massage Therapy)
- Paralegal Studies

**Automotive Technology  
Certificate of Proficiency**

This Certificate of Proficiency in Automotive Technology provides students with classroom and laboratory experience and prepares students for employment in the auto service industry.

Degree: Students may apply credits toward the Automotive Technology Degree program. Program Manager - Mr. Edward E. Kopp (216-987-5330). This program has application and/or progression requirements.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
AUTO-1100	Introduction to Automotive Service Procedures	2
AUTO-1300	Automotive Engines	3
AUTO-1350	Manual Transmission and Drivetrain	2
AUTO-1450	Automotive Braking Systems	3
AUTO-1500	Automotive Electrical Fundamentals	2
ENG-1010	College Composition I	3
		<b>15</b>
<u>Second Semester</u>		
AUTO-1400	Automotive Alignment, Steering and Suspension	3
AUTO-2300	Automatic Transmissions	3
AUTO-2350	Automotive HVAC	2
AUTO-2400	Engine Performance	3
AUTO-2470	Automotive Electrical Systems	2
MATH-xxxx	1000-level MATH course or higher*	3
		<b>16</b>
	<b>PROGRAM TOTAL</b>	<b>31</b>

\*MATH-1800/2800 & 1820/2820 may not be used to meet this requirement.

**BUSINESS MANAGEMENT (Office Operations Management)  
(formerly Office Administration/Administrative Assistant)**

**Certificate of Proficiency**

The one-year certificate program is designed to accommodate those who are employed full-time or are attending college on a part-time basis, seeking to upgrade their existing employment skills or begin a job in an office setting. The Office Operations Management Certificate of Proficiency prepares individuals with the background needed to move ahead rapidly in the growing field of office management.

Degree: Students may apply credits toward the Business Management Degree with a Concentration in Office Operations Management.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
BADM-1000	Business Language Skills	2
BADM-1020	Introduction to Business	3
ENG-1010	College Composition I	3
IT-1000	Keyboarding *	2
IT-1010	Introduction to Microcomputer Applications	3
IT-1030	Internet Fundamentals	2
MATH-1060	Survey of Mathematics or higher**	3
		<b>18</b>
<u>Second Semester</u>		
BADM-1120	Principles of Management	3
BADM-2010	Business Communications	3
ITAP-1200	Word Processing I	3
ITAP-1230	Basic Business Formatting	3
ITAP-1240	Basic Filing with Microcomputer Applications	3
ITAP-1250	Electronic Spreadsheet Use and Design	3
		<b>18</b>
	<b>PROGRAM TOTAL</b>	<b>36</b>

\*May be waived through demonstration of 20 wpm skills or equivalent proficiency.

\*\*MATH-1800/2800 & 1820/2820 may not be used to meet this requirement.

**Commercial Art and Design Technology (Graphic Design)**

**Certificate of Proficiency**

This one-year certificate program is designed to accommodate individuals who want to upgrade their design, drawing and computer graphics skills. The courses are designed to improve the graduate’s design, drawing and problem solving techniques.

Degree: Students may apply credits toward the Commercial Art and Design Degree program. This program has application and/or progression requirements

Course No.	Course Title	Credit Hrs.
<u>First Semester</u>		
CART-1020	Macintosh Basics*	1
CART-1050	Introduction to Commercial Art and Graphic Design	2
CART-1060	History and Trends in Commercial Art	3
CART-1300	Typography and Layout	2
CART-1310	Graphic Design Drawing	1
CART-131L	Graphic Design Drawing Studio	1
CART-1340	Rendering Techniques	2
CART-1400	Decorative Design	2
ENG-1010	College Composition I	3
		<b>17</b>
<u>Second Semester</u>		
ART-1050	Drawing I.....OR	2-3
CART-xxxx	Any CART elective course	
CART-1500	Advertising and Design	2
CART-1600	Imaging and Design	1
CART-160L	Imaging and Design Studio	1
CART-2300	Page Layout and Design	2
CART-2310	Graphic Design and Illustration	2
CART-2320	Designing for Production	2
CART-xxxx	CART elective course**.....OR	2-3
GCMT-1500	Black and White Photography I	
MATH-xxxx	1000-level MATH course or higher ***	3
		<b>17-19</b>
<b>PROGRAM TOTAL</b>		<b>34-36</b>

\*Complete before beginning certificate program. May be waived with written permission from the CART department, if student possesses prior computer graphics knowledge.

\*\*CART Electives

CART-2330	Graphic Production	CART-2410	Corporate Graphics
CART-2420	Publication Design	CART-2430	Magazine Design
CART-2440	Package Design	CART-2450	Media Design
CART-2700	Portfolio Preparation	CART-2820	Individual Advanced Study in CART

\*\*\*MATH-1800/2800 & 1820/2820 may not be used to meet this requirement.

**Computer-Aided Drafting  
Certificate of Proficiency**

This program is for students who wish to acquire computer drafting skills for entry-level positions in a variety of industries. Students will get background knowledge to aid them in developing 2D drawings with an introduction to 3D CAD.

Degree: Students may apply credits toward the Manufacturing/Industrial Technology Degree with a Concentration in Drafting Technology.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
ENG-1010	College Composition I	3
MATH-1160	Technical Mathematics I	4
MET-1100	Technology Orientation	2
MIT-1200	Engineering Drawing*	2
MIT-1220	Introduction to AutoCAD*	2
MIT-1250	Materials and Machine Tools	3
MIT-1600	CNC Programming	3
		<b>19</b>
<u>Second Semester</u>		
EET-1220	Circuits and Electronics	3
MATH-1360	Technical Mathematics II	5
MIT-1100	Computer Applications and Programming	2
MIT-2030	Industrial Drawing Essentials	3
MIT-2040	Industrial CAD I	3
		<b>16</b>
	<b>PROGRAM TOTAL</b>	<b>35</b>

\*Consecutive eight-week courses.

**Computer-Aided Manufacturing (CAM)**

**Certificate of Proficiency**

This program is for students who wish to acquire computer-integrated machining and programming skills for entry-level employment in a manufacturing and metals machining industry.

Degree: Students may apply credits toward the Manufacturing/Industrial Technology Degree program.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
MATH-1160	Technical Mathematics I	4
MET-1100	Technology Orientation	2
MIT-1200	Engineering Drawing*	2
MIT-1220	Introduction to AutoCAD*	2
MIT-1250	Materials and Machine Tools	3
MIT-1600	CNC Programming	3
MIT-2000	CAD/CAM I	3
		<b>19</b>
<u>Second Semester</u>		
ENG-1010	College Composition I	3
MIT-1300	Metallurgy and Manufacturing Processes	3
MIT-2040	Industrial CAD I	3
MIT-2100	Advanced Machine Tools	3
MIT-2700	CAD/CAM II	3
		<b>15</b>
	<b>PROGRAM TOTAL</b>	<b>34</b>

\*Consecutive eight-week courses.

**Computer Maintenance Technology**

**Certificate of Proficiency**

Students will be prepared with the knowledge and skills essential for a career as an entry-level service technician. They will prepare to service computers and peripherals by discovering how to install, configure, diagnose, repair, upgrade and maintain microcomputers. Skills acquired will assist students in preparing to take industry A+ Certification exams. A+ Certification is an industry recognized credential that distinguishes one as a knowledgeable service professional.

Degree: Students may apply credits toward the Computer Networking Concentration in the Electrical-Electronic Engineering Degree.

Course No.	Course Title	Credit Hrs.
<u>Certificate Admission Requirements</u>		
IT-1000	Keyboarding *	2
IT-1010	Introduction to Microcomputer Applications **	3
IT-1040	Microcomputer Operating Systems **	3
		<b>8</b>
<u>Summer Semester</u>		
EET-1000	Introduction to PC Maintenance	2
EET-1010	DOS for Technicians	2
		<b>4</b>
<u>First Semester</u>		
ENG-1010	College Composition I	3
EET-1020	Basic Software Troubleshooting	2
EET-1030	Installing and Configuring Operating Systems	2
EET-1040	On-line Communications	1
ITNT-2300	Networking Fundamentals	3
		<b>11</b>
<u>Second Semester</u>		
EET-1050	PC Systems Servicing and Troubleshooting	3
EET-1060	PC Networking	2
EET-1070	PC Laser Printer Installation and Repair	1
EET-1080	Service Operations and Communication Procedures	1
EET-1090	Test Preparations for A+ Certification	1
MATH-1060	Survey of Mathematics or higher...OR	3
MATH-1141	Applied Algebra and Mathematical Reasoning...OR	
MATH-1180	Intermediate Algebra for Technologies or higher***	3
		<b>11</b>
	<b>PROGRAM TOTAL</b>	<b>34-35</b>

\*Waived if student possesses 20-wpm typing speed or high school typing course, and written departmental approval from EET department.

\*\*If course requirements have already been met, the 3-credit requirement may be fulfilled by substituting with another

3-credit course, or with By-Passed credit (providing six semester credits have already been successfully completed at CCC), and with written departmental approval from EET department.

\*\*\*MATH-1800/2800 & 1820/2820 may not be used to meet this requirement.

**Dental Assisting  
Certificate of Proficiency**

Dental Assistants are competent in technical, interpersonal and management areas. They work directly with dentists and patients and have responsibility for chairside assisting, taking radiographs (x-rays), laboratory procedures, business procedures and patient management. This program prepares graduates for entry-level positions and eligibility to take the Dental Assisting National Board Certification Exam and the Ohio Dental Assistant Radiographer exam.

Degree: Students may apply credits toward the Dental Assisting Degree program at Jefferson Community College in Steubenville, Ohio. Program Manager - Ms. Mary Lou Gerosky (216-987-4494). This program has specific admission requirements

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
BIO-1050	Human Biology	3
BIO-1200	Oral Structures and Development	3
DAST-1300	Dental Assisting Methods I	5
DAST-1310	Dental Assisting Radiography I	3
DAST-1320	Dental Office Management	3
		<b>17</b>
<u>Second Semester</u>		
DAST-1400	Dental Assisting Methods II	3
DAST-1410	Dental Assisting Radiography II	2
DAST-1420	Current Concepts for the Dental Assistant	1
DAST-1860	Dental Assisting Practicum	4
HTEC-1100	Allied Dental Pharmacology	2
HTEC-1200	Patient Management for Health Career Professionals	1
		<b>13</b>
<u>Summer Semester</u>		
ENG-1010	College Composition I	3
MATH-1140	Applied Algebra and Mathematical Reasoning or higher*	3
		<b>6</b>
	<b>PROGRAM TOTAL</b>	<b>36</b>

\*MATH-1800/2800 may not be used to meet this requirement.



**Early Childhood Education - Infant Toddler**

**Certificate of Proficiency**

The infant toddler certificate provides students with a specialized focus on the unique strengths and needs of infants and toddlers. Students will study the comprehensive development of the young child, birth-3 years, with a focus on understanding current brain research and best care giving practices. The practicum component of the program will support the students as they transfer their learning to their work with young children. The program is available for early childhood educators, parents, administrators and health care professionals. The certificate is 30 credit hours, with 21 of the credit hours applying to the Associate of Applied Science in Early Childhood Education. Program Manager - Dr. Sandra Redmond (216-987-2380). This program has specific admission requirements.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
ECED-1010	Introduction to Early Childhood Education: Children's Development and Programs	4
ECED-2500	Infant/Toddler Development, Relationship, and Programs	3
HLTH-1400	Childhood Health, Safety and Nutrition	3
ENG-1010	College Composition I	3
		<b>13</b>
<u>Second Semester</u>		
ECED-1540	Programming and Adjustments in Infant/Toddler Care	3
ECED-1550	Experiences with Infants	1
ECED-1850	Infants in Early Childhood Setting Practicum	2
ECED-2300	Child Behavior and Guidance	3
MATH-1060	Survey of Mathematics	3
		<b>12</b>
<u>Summer Semester</u>		
ECED-1570	Experiences with Toddlers	1
ECED-1870	Toddlers in Early Childhood Setting Practicum	2
ECED-2400	Center-Family Relationships	2
		<b>5</b>
	<b>PROGRAM TOTAL</b>	<b>30</b>

**Environmental Health and Safety Technology**

**Certificate of Proficiency**

The Environmental Health and Safety Certificate program is a one-year course of study designed to provide students with a well-rounded education in safety and regulatory compliance. It is intended for those currently working in the environmental field and seeking to upgrade and broaden their knowledge or those working in other fields and desiring coursework to help change or modify their careers. The first semester of the program focuses on introductory courses and general proficiencies to prepare the student for the second semester of courses specific to safety and compliance management.

Degree: Students may apply credits toward the Environmental Health and Safety Technology Degree program, Option 1. Program Manager – Herb Mausser (216-987-2236).

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
EHST-1301	Introduction to Environmental Technology	3
EHST-1310	Introduction to Environmental Law	4
EHST-1320	International Standards Organization (ISO) 14,000	2
ENG-1010	College Composition I	3
MATH-1060	Survey of Mathematics or higher*	3
		<b>15</b>
<u>Second Semester</u>		
EHST-1350	Health and Safety in the Workplace	3
EHST-2340	Department of Transportation Regulations	2
EHST-2350	Emergency Planning and Response	2
EHST-2380	Risk Assessment	2
EHST-2390	Solid and Hazardous Waste Management	3
EHST-2400	Advanced Environmental Technology	3
		<b>15</b>
	<b>PROGRAM TOTAL</b>	<b>30</b>

\*MATH-1800/2800 & 1820/2820 may not be used to meet this requirement.

**Food and Beverage Operations**

**Certificate of Proficiency**

This program provides all the basic, advanced skills and practice needed to start a career as a professional Food and Beverage Manager. Help is provided at the end of the year, placing the student in a work situation that will provide the work experience needed to advance and the work experience needed for certification.

Degree: Students may apply credits toward Hospitality Management with a Concentration in Restaurant/Foodservice Management Degree program. Program Manager – Ms. Jan DeLucia (216-987-4082). This program has specific admission requirements.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
HOSP-1010	Introduction to the Hospitality Industry	2
HOSP-1020	Sanitation and Safety	2
HOSP-1030	Basic Food Preparation	3
HOSP-1040	Customer Services	2
HOSP-1370	Food and Beverage Operations I	3
MATH-1060	Survey of Mathematics or higher *	3
		<b>15</b>
<u>Second Semester</u>		
ENG-1010	College Composition I	3
HOSP-1670	Food and Beverage Operations II	3
HOSP-1860	Hospitality Practicum and Seminar	3
HOSP-2400	Hospitality Management and Supervision	3
HOSP-2480	Hospitality Law	3
HOSP-2700	Hospitality Purchasing	2
		<b>17</b>
	<b>PROGRAM TOTAL</b>	<b>32</b>

\*MATH 1800/2800 & 1820/2820 may not be used to meet this requirement.

**Information Technology (Information Application Specialist)  
(formerly Office Administration/Word Processing Specialist)  
Certificate of Proficiency**

This certificate program prepares the student in the basics of information processing. Hands-on training in information processing of applications and functions are provided.

Degree: Students may apply credits toward the Information Technology (Information Application Specialist) Degree program.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
BADM-1000	Business Language Skills	2
ENG-1010	College Composition I	3
IT-1000	Keyboarding*	2
IT-1010	Introduction to Microcomputer Applications	3
IT-1060	Introduction to Windows	2
ITAP-1240	Basic Filing with Microcomputer Applications	3
		<b>15</b>
<u>Second Semester</u>		
BADM-2010	Business Communications	3
ITAP-1200	Word Processing I	3
ITAP-1230	Basic Business Formatting	3
ITAP-1250	Electronic Spreadsheet Use and Design	3
ITAP-2270	Desktop Publishing	3
MATH-1060	Survey of Mathematics or higher**	3
		<b>18</b>
<u>Summer Semester</u>		
ITAP-2200	Word Processing II	3
		<b>3</b>
	<b>PROGRAM TOTAL</b>	<b>36</b>

\*If typing speed is at least 20 wpm, replace IT-1000 with ITAP-1220 Speed Building.

\*\*MATH-1800/2800 & 1820/2820 may not be used to meet this requirement.

**Lodging Rooms Division  
Certificate of Proficiency**

This program focuses on training the student for Rooms Division positions in the lodging industry. Students will have on-site training at area lodging facilities and will learn to use front desk and other related software. On successfully completing the courses, student will be awarded a Rooms Division Certification of Specialization from the American Hotel and Motel Association. Help is provided at the end of the year, placing the student in a work situation that will provide the work experience needed to advance.

Degree: Students may apply credits toward Hospitality Management with a Concentration in Lodging-Tourism Management Degree program. Program Manager – Ms. Jan DeLucia (216-987-4082). This program has specific admission requirements.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
ENG-1010	College Composition I	3
HOSP-1010	Introduction to the Hospitality Industry	2
HOSP-1020	Sanitation and Safety	2
HOSP-1040	Customer Services	2
IT-1010	Introduction to Microcomputer Applications	3
MATH-1060	Survey of Mathematics or higher*	3
		<b>15</b>
<u>Second Semester</u>		
ACCT-1020	Applied Accounting	3
HOSP-1480	Housekeeping Operations	2
HOSP-1580	Front Office Operations	2
HOSP-1860	Hospitality Practicum and Seminar	3
HOSP-2400	Hospitality Management and Supervision	3
HOSP-2480	Hospitality Law	3
		<b>16</b>
	<b>PROGRAM TOTAL</b>	<b>31</b>

\*MATH-1800/2800 & 1820/2820 may not be used to meet this requirement.

**Machine Tools**

**Certificate of Proficiency**

This program provides a certificate of proficiency to students who wish to acquire hands-on manual and computer programming entry-level machining skills for possible employment in the metal working industry.

Degree: Students may apply credits toward the Manufacturing/Industrial Technology Degree program.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
ENG-1010	College Composition I	3
MATH-1160	Technical Mathematics I	4
MET-1100	Technology Orientation	2
MIT-1200	Engineering Drawing*	2
MIT-1220	Introduction to AutoCAD*	2
MIT-1250	Materials and Machine Tools	3
		<b>16</b>
<u>Second Semester</u>		
ENG-1020	College Composition II	3
MATH-1360	Technical Mathematics II	5
MIT-1300	Metallurgy and Manufacturing Processes	3
MIT-1600	CNC Programming	3
MIT-2100	Advanced Machine Tools	3
		<b>17</b>
	<b>PROGRAM TOTAL</b>	<b>33</b>

\*Consecutive eight-week courses.

**Medical Assisting  
Certificate of Proficiency**

The Medical Assistant is a multi-skilled professional who assists the physician with the administrative and clinical aspects of patient care. The program includes courses in administrative, clinical and communication skills; ethical and legal standards of medical practice; and a "hands on" clinical practicum experience in the health care industry. The Medical Assisting Certificate program is three semesters in length starting in the Fall semester with completion the following August. Graduates of the one-year program are eligible to take the National Certifying Examination given by the American Association of Medical Assistants.

Degree: Graduates may transfer directly into the Medical Assisting Degree program. Program Manager - Ms. Barbara Freeman (216-987-4438). This program has specific admission requirements.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
ENG-1010	College Composition I	3
HTEC-1110	Ethics for Health Care Professionals	1
HTEC-1610	Introduction to Pharmacology	2
MA-1020	Medical Terminology I	3
MA-1320	Office Laboratory Procedures	3
MA-1400	Basic Clinical Medical Assisting	2
MA-1420	Office Record Documentation and Management	1
MA-1500	Medical Office Communication	3
		<b>18</b>
<u>Second Semester</u>		
HIM-1010	Basic Medical Transcription	1
MA-1511	Medical Office Procedures	3
MA-2010	Medical Terminology II	2
MA-2410	Advanced Clinical Medical Assisting	3
MA-2520	Medical Billing	3
MA-2860	Medical Assisting Practicum	2
MA-2980	Medical Assisting Seminar	1
MATH-1060	Survey of Mathematics or higher*	3
		<b>18</b>
	<b>PROGRAM TOTAL</b>	<b>36</b>

\*MATH-1800/2800 & 1820/2820 may not be used to meet this requirement.

**Mortgage Finance  
Certificate of Proficiency**

The Mortgage Finance Program offers a combination of courses, field experience and professional training in preparing students for a career in the mortgage finance and real estate industry. Students are taught by industry experts and upon completion of the academic requirements are prepared to enter such challenging careers as loan originators, underwriters, home buying counselors and loan processors.

Degree: Students may apply credits toward the Real Estate (Mortgage Finance) Degree program. Interim Program Manager - Mary Reis (216-987-4431).

Course No.	Course Title	Credit Hrs.
<u>First Semester</u>		
IT-1010	Introduction to Microcomputer Applications*	3
MATH-1060	Survey of Mathematics or higher**	3
REAL-1301	Principles and Practices of Real Estate	3
REAL-1320	Diversity Awareness and Fair Lending	2
REAL-1330	Loan Origination	2
REAL-1501	Valuation of Residential Properties	1
		<b>14</b>
<u>Second Semester</u>		
ACCT-1010	Quantitative Applications for Accounting and Business...OR	3
ACCT-1020	Applied Accounting	
ENG-1010	College Composition I	3
REAL-2310	Loan Processing	2
REAL-2320	Affordable Housing	2
REAL-2330	Loan Underwriting	2
REAL-2350	Homebuyers Education and Counseling	2
		<b>14</b>
<u>Summer Semester</u>		
ACCT-xxxx	Any ACCT elective course.....OR	3-4
BADM-xxxx	Any BADM elective course	
REAL-281S	Special Advanced Laboratory Topics in Real Estate	1
REAL-2820	Independent Advanced Study in Real Estate.....OR	1-2
REAL-2940	Mortgage Finance Field Experience	
		<b>5-7</b>
	<b>PROGRAM TOTAL</b>	<b>33-35</b>

\*May be waived with written departmental approval (student must have prior knowledge of word processing, spreadsheet and database software).

\*\*MATH-1800/2800 & 1820/2820 may not be used to meet this requirement.



**Optical Technology  
Certificate of Proficiency**

A student who receives a one-year certificate can work in a retail outlet, optical laboratory or a doctor's office. Other career paths can lead to related work as a sales representative for optical products. Note: In order to be eligible to take the State Board Exam for licensure, you must finish the Optical Technology Degree program.

Degree: Students may apply credits toward the Optical Technology Degree program.

Program Manager - Mr. Frank Corsello (216-987-4454). This program has specific admission requirements.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
ENG-1010	College Composition I	3
OPT-1310	Theoretical Optics I	2
OPT-1410	Mechanical Optics I	2
OPT-1510	Optical Dispensing I	3
OPT-1610	Contact Lens I	2
PSY-1010	General Psychology	3
		<b>15</b>
<u>Second Semester</u>		
MATH-1060	Survey of Mathematics or higher*	3
OPT-1320	Theoretical Optics II	2
OPT-1420	Mechanical Optics II	2
OPT-1520	Optical Dispensing II	3
OPT-1620	Contact Lens II	3
		<b>13</b>
<u>Summer Semester</u>		
IT-1010	Introduction to Microcomputer Applications	3
OPT-2500	Optical Business	2
PHYS-1300	Physics of Optical Materials	4
		<b>9</b>
	<b>PROGRAM TOTAL</b>	<b>37</b>

\*MATH-1800/2800 & 1820/2820 may not be used to meet this requirement.

**Pharmacy Technician  
Certificate of Proficiency**

Hospital pharmacists have long recognized the need in their field for technically trained support personnel. Qualified pharmacy technicians, after completion of the certificate program, will find employment in community and hospital pharmacies, clinics or other institutions. Their duties may involve dispensing, pricing, inventory control, typing, records maintenance, cash register work and operation of computer terminals.

Degree: Students may apply credits toward the Pharmacy Technology Degree program. Program Manager: (216-987-2381). This program has specific admission requirements.

Course No.	Course Title	Credit Hrs.
<u>Summer Semester</u>		
BIO-1100	Introduction to Biological Chemistry	3
ENG-1010	College Composition I	3
		<b>6</b>
<u>First Semester</u>		
BIO-1050	Human Biology	3
BIO-105L	Human Biology Laboratory	1
MATH-1141	Applied Algebra and Mathematical Reasoning or higher*	3
PHM-1300	Introduction to Pharmacy Practice	3
PHM-1350	Pharmacy Practice I	3
PHM-1450	Pharmacology and Therapeutic Principles I	3
		<b>16</b>
<u>Second Semester</u>		
BIO-2500	Microbiology	4
PHM-1360	Pharmacy Practice II	3
PHM-1460	Pharmacology and Therapeutic Principles II	3
PHM-1860	Pharmacy Technology Practicum I	3
		<b>13</b>
	<b>PROGRAM TOTAL</b>	<b>35</b>

\*MATH-1800/2800 & 1820/2820 may not be used to meet this requirement.

**Plant Science and Landscape Technology (Landscape Technician)**

**Certificate of Proficiency**

The one-year certificate program offers persons already employed or attending college on a part-time basis the opportunity to upgrade their existing landscape or horticulture skills in order to advance more rapidly in a career which places great value on a combination of practical and classroom experience. The Landscape Technician Certificate of Proficiency features course work in such horticulture basics as botany, plant identification, plant diseases and insect pests, soil technology and landscape practices.

Degree: Students may apply credits earned toward the Plant Science and Landscape Technology Degree program.

Program Manager: Mr. David Emmitt (216-987-2235). This program has application and/or progression requirements.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
ENG-1010	College Composition I	3
MATH-1060	Survey of Mathematics or higher*	3
PST-1300	Horticultural Botany	3
PST-1310	Landscape Plants I	3
PST-1410	Equipment Operations and Maintenance	3
		<b>15</b>
<u>Second Semester</u>		
ACCT-1020	Applied Accounting	3
ECON-1210	Survey of Economics	3
PST-1320	Landscape Plants II	3
PST-1350	Plant Production	2
PST-1420	Landscape Practices	3
PST-2350	Landscape Contracting	3
		<b>17</b>
	<b>PROGRAM TOTAL</b>	<b>32</b>

\*MATH-1800/2800 & 1820/2820 may not be used to meet this requirement.

**Respiratory Care - Polysomnography  
Certificate of Proficiency**

This program has specific admission requirements.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>Summer Semester</u>		
BIO-1100	Introduction to Biological Chemistry	3
BIO-2330	Anatomy and Physiology I	4
MATH-1141	Applied Algebra and Mathematical Reasoning	3
RESP-1310	Cardiopulmonary Physiology	3
RESP-1410	Beginning Polysomnography	2
		<b>16</b>
<u>First Semester</u>		
BIO-2340	Anatomy and Physiology II	4
ENG-1010	College Composition I	3
RESP-1421	Intermediate Polysomnography I	2
RESP-142L	Intermediate Polysomnography I Laboratory	1
RESP-1934	Directed Practice I	3
		<b>13</b>
<u>Second Semester</u>		
RESP-1430	Intermediate Polysomnography II	3
RESP-1440	Neurophysiology of Sleep	2
RESP-2934	Directed Practice II	3
		<b>8</b>
	<b>PROGRAM TOTAL</b>	<b>36</b>

**Practical Nursing  
Certificate of Proficiency**

The Practical Nurse (under the direction of a physician, dentist, optometrist, podiatrist or registered nurse) works in a variety of settings including: clinics, home care, hospitals, long-term care facilities and physicians' offices. The curriculum consists of 42 semester credit hours, divided among nursing and non-nursing courses. The nursing courses consist of classroom activities, hospital and long-term care experiences caring for patients of all ages with a variety of health deviations. Upon successful completion of the program requirements, graduates are eligible to take the National Council Licensure Examination for Practical Nurses. ACCESS in Nursing is available for graduates.

**Misdemeanors and/or Felonies:** The Ohio Board of Nursing frequently receives calls from prospective students, school officials, and the Bureau of Vocational Rehabilitation Services regarding whether the Board will permit a person who has a prior record of misdemeanors and/or felonies to sit for the licensure examination or become licensed. The Board of Nursing has no statutory authority to advise as to whether an individual will be permitted to take the licensure examination or be able to become licensed until the individual actually applies to the Board for licensure by examination (Ohio Board of Nursing [9/23/98]. Requirements for Section 5 of the application for Licensure as a Nurse).

Program Manager: Ms. Janice Melnick (216-987-3136). This program has specific admission requirements.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
BIO-1100	Introduction to Biological Chemistry*	3
ENG-1010	College Composition I	3
MATH-1141	Applied Algebra and Mathematical Reasoning or higher**	3
PNUR-1310	Fundamentals of Nursing	4
PNUR-1320	Nursing Management of Adults I	4
		<b>17</b>
<u>Second Semester</u>		
BIO-2330	Anatomy and Physiology I	4
NURS-1300	Health Assessment	2
PNUR-1330	Nursing Management of Adults II	8
PSY-1010	General Psychology	3
		<b>17</b>
<u>Third Semester</u>		
PNUR-1340	Nursing Care of Families	4
PSY-2020	Life Span Development	4
		<b>8</b>
	<b>PROGRAM TOTAL</b>	<b>42</b>

\*CHEM-1010 and CHEM-1020 replace BIO-1100 for students planning to transfer credits.

\*\*MATH-1160, 1800/2800, and 1820/2820 may not be used to meet this requirement.

**Precision Machining Technology  
Certificate of Proficiency**

Cuyahoga Community College has a mission to provide motivated men and women the opportunity to learn a meaningful trade by working in the field under the supervision of a skilled craftsman, and by attending related classroom training. In most cases Machine Trades Apprentices receive an excellent wage rate, paid health insurance, state-of-the-art training, and advancement opportunities. The PMT provides the theoretical and hands-on experience to enable the student to enter into the industry at the Pre-Apprenticeship level.

Program Manager - Mr. David Grabski (216-987-3218).

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
ATMT-1100	Manufacturing Skills I	3
ATMT-1120	Machine Operations I	6
ATMT-1200	Machine Tool Theory	4
ENG-1010	College Composition I	3
		<b>16</b>
<u>Second Semester</u>		
ATMT-1110	Manufacturing Skills II	2
ATMT-1500	Manufacturing Technology Skills I	4
ATMT-2120	Machine Operations II	6
MATH-1160	Technical Mathematics I	4
		<b>16</b>
	<b>PROGRAM TOTAL</b>	<b>32</b>

**Professional Baking  
Certificate of Proficiency**

This program provides all of the basic, advanced skills and practice needed to start on a career as a professional pastry Culinarian. It includes all of the educational requirements for certification through the executive pastry chef level of certification by the American Culinary Federation. Help is provided at the end of the year, placing the student in a work situation that will provide the work experience needed to advance and the work experience needed for certification.

Degree: Students (especially those seeking executive pastry chef status) may apply credits toward Hospitality Management Degree with a Concentration in Culinary Arts. Program Manager – Ms. Jan DeLucia (216-987-4082). This program has specific admission requirements.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
HOSP-1010	Introduction to the Hospitality Industry	2
HOSP-1020	Sanitation and Safety	2
HOSP-1030	Basic Food Preparation*	3
HOSP-1450	Advanced Food Preparation*	4
HOSP-1551	Baking Production and Sales I	3
MATH-1060	Survey of Mathematics or higher**	3
		<b>17</b>
<u>Second Semester</u>		
ENG-1010	College Composition I	3
HOSP-1040	Customer Services	2
HOSP-1350	Menu Planning and Nutrition	3
HOSP-2400	Hospitality Management and Supervision	3
HOSP-2550	Baking Production and Sales II	3
		<b>14</b>
<u>Summer Semester</u>		
HOSP-1860	Hospitality Practicum and Seminar	3
		<b>3</b>
	<b>PROGRAM TOTAL</b>	<b>34</b>

\*HOSP-1030 must be completed before taking HOSP 1450. Take HOSP-1030 in the first eight-weeks of a semester and take HOSP-1450 in the second eight-weeks of a semester.

\*\*MATH-1800/2800 & 1820/2820 may not be used to meet this requirement.

**Professional Culinarian/Cook  
Certificate of Proficiency**

This program provides all the basic, advanced skills and practice needed to start a career as professional cook/chef. It includes all of the educational requirements for certification through the executive chef level of certification by the American Culinary Federation. Help is provided at the end of the year, placing the student in a work situation that will provide work experience needed to advance and the work experience needed for certification.

Degree: Students and those seeking executive chef status may apply credits toward Hospitality Management Degree with a Concentration in Culinary Arts. Program Manager – Ms. Jan DeLucia (216-987-4082). This program has specific admission requirements.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
HOSP-1010	Introduction to the Hospitality Industry	2
HOSP-1020	Sanitation and Safety	2
HOSP-1030	Basic Food Preparation*	3
HOSP-1450	Advanced Food Preparation*	4
HOSP-1551	Baking Production and Sales I	3
MATH-1060	Survey of Mathematics or higher**	3
		<b>17</b>
<u>Second Semester</u>		
ENG-1010	College Composition I	3
HOSP-1040	Customer Services	2
HOSP-1350	Menu Planning and Nutrition	3
HOSP-2350	Restaurant Operations	3
HOSP 2400	Hospitality Management and Supervision	3
HOSP-2990	Advanced Culinary Skills and Evaluation	2
		<b>16</b>
<u>Summer Semester</u>		
HOSP-1860	Hospitality Practicum and Seminar	3
		<b>3</b>
	<b>PROGRAM TOTAL</b>	<b>36</b>

\*HOSP-1030 must be completed before taking HOSP-1450. Take HOSP-1030 in the first eight-weeks of a semester and take HOSP-1450 in the second eight weeks of a semester.

\*\*MATH-1800/2800 & 1820/2820 may not be used to meet this requirement.



**Sterile Processing and Distribution Technology  
Certificate of Proficiency**

The sterile processing and distribution technician decontaminates, inspects, assembles, and sterilizes instruments and surgical trays. The technician also manages inventory control, orders supplies, inspects, maintains, delivers and retrieves equipment and instruments for the surgery suite, emergency room and intensive care units. A "hands on" clinical practicum experience in an area hospital is included in the course of study. This program prepares graduates for eligibility for the National Certifying Examination given by the National Institute for the Certification of Healthcare Sterile Processing and Distribution Personnel. Program Manager - Ms. Barbara Freeman (216-987-4438). This program has specific admission requirements.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
BIO-1100	Introduction to Biological Chemistry...OR	3
HTEC-1020	Integrated Basic Science	
ENG-1010	College Composition I	3
HTEC-1110	Ethics for Health Care Professionals	1
MA-1010	Introduction to Medical Terminology...OR	2-3
MA-1020	Medical Terminology I	
MA-1700`	Sterile Processing Technology I	4
MATH-1060	Survey of Mathematics or higher*	3
		<b>16-17</b>
<u>Second Semester</u>		
BADM-1020	Introduction to Business	3
MA-1710	Sterile Processing Technology II	4
MA-1860	Sterile Processing Practicum**	2
MA-1860	Sterile Processing Practicum**	2
IT-1000	Keyboarding.....OR	2-3
IT-1010	Introduction to Microcomputer Applications	
SPCH-1000	Fundamentals of Interpersonal Communications...OR	3
SPCH-1010	Fundamentals of Speech Communication	
		<b>16-17</b>
	<b>PROGRAM TOTAL</b>	<b>32-34</b>

\*MATH-1800/2800 & 1820/2820 may not be used to meet this requirement.

\*\*Consecutive eight-week courses.

**Diagnostic Medical Sonography  
Post-Degree Professional Certificate**

The Post Degree Professional Certificate is designed for degree-holding medical professionals, specifically Diagnostic Medical Sonographer, Radiologic Technologist, Respiratory Therapist, Occupational Therapist, or Physical Therapist. The curriculum prepares the student for an entry-level position as a Diagnostic Medical Sonographer. The Diagnostic Medical Sonographer produces, evaluates, and understands ultrasound images and related data. The sonographer provides a summary of their technical findings to the qualified interpreting physician to aid in rendering a medical decision. This program consists of on-campus didactic instruction and lab as well as off-campus clinical applications at our affiliated health care institutions. The Diagnostic Medical Sonography program is accredited by the Commission on Accreditation of Allied Health education Programs (CAAHEP). Upon completion of the Diagnostic Medical Sonography certificate program, graduates are eligible to apply for the certifying exams offered by the American Registry of Diagnostic Medical Sonographers (ARDMS) in the specialty of their educational training. Students may apply these course credits toward the Associate of Applied Science degree in Diagnostic Medical Sonography

Program Manager - Ms. Denise Kinches (216-987-5564). This program has specific admission requirements

Note: Numbers in parentheses in the certificate sequence relate to Options 1, 2, 3, and 4. Select option before beginning this Post Degree certificate.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
DMS-1301	Introductory Sonographic Scanning	3
DMS-1360	Anatomy & Physiology for Cardiovascular Sonographers (2,4)	0-2
DMS-1370	Clinical Cardiovascular Assessment (2,4).....OR	0-3
DMS-1400	Abdominal Sonography I (1)	—
		<b>3-8</b>
<u>Second Semester</u>		
DMS-2300	Intermediate Sonographic Scanning	1
DMS-1500	Gynecologic & Obstetrical Sonography (3) .....OR	2-4
DMS-1600	Echocardiography I (2).....OR	
DMS-1700	Vascular Sonography I (4).....OR	
DMS-2400	Abdominal Sonography II (1)	
DMS-1910	Initial Directed Practice	3
DMS-2350	Sonographic Instruments and Physics.....OR	3
DMS-2370	Advanced Sonographic Physical Principles and Flows	—
		<b>9-11</b>
<u>Summer Semester</u>		
DMS-1920	Directed Practice I	4
DMS-2600	Echocardiography II (2).....OR	0-2
DMS-2700	Vascular Sonography II (4)	—
		<b>4-6</b>
<u>Third Semester</u>		
DMS-2500	Obstetrical Sonography (3).....OR	0-4
DMS2970	Vascular Surgical Procedures and Clinical Correlations (4)	
DMS-2910	Directed Practice II	4
		<b>4-8</b>
	<b>PROGRAM TOTAL FOR OPTION 1</b>	<b>25</b>
	<b>PROGRAM TOTAL FOR OPTION 2</b>	<b>26</b>
	<b>PROGRAM TOTAL FOR OPTION 3</b>	<b>26</b>
	<b>PROGRAM TOTAL FOR OPTION 4</b>	<b>28</b>

- (1) Abdominal Option
  - DMS-1400 – Abdominal Sonography I
  - DMS-2400 – Abdominal Sonography II
- (2) Echocardiography Option
  - DMS-1360 – Anatomy and Physiology for Cardiovascular Sonographers
  - DMS-1370 – Clinical Cardiovascular Assessment
  - DMS-1600 – Echocardiography I
  - DMS-2600 – Echocardiography II
- (3) OB/Gyn Option
  - DMS-1500 – Gynecologic and Obstetrical Sonography
  - DMS-2500 – Obstetrical Sonography
- (4) Vascular Option
  - DMS-1360 – Anatomy and Physiology for Cardiovascular Sonographers
  - DMS-1370 – Clinical Cardiovascular Assessment
  - DMS-1700 – Vascular Sonography I
  - DMS-2700 – Vascular Sonography II
  - DMS-2970 – Vascular Surgical Procedures and Clinical Correlation

**Legal Nurse Consultant**

**Post-Degree Professional Certificate**

The legal nurse, a highly specialized member of the litigation team, deals exclusively with the medical aspects of a lawsuit, offers expert opinion and testimony, and acts as a liaison between the attorney, the health care providers and the client. Legal nurse consultants assess damages, educate attorneys on medical facts and issues, locate experts, organize and analyze medical records, research medical and legal literature and assist in the preparation of pleadings and discovery. Legal nurse consultants are employed as independent consultants, by insurance companies, in health management organizations, in law firms, in hospitals and clinics and in government (particularly social security and workers' compensation) agencies. Program Manager - Ms. Lisa O'Rear-Lassen (216-987-5112). This program has specific admission requirements.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
IT-1010	Introduction to Microcomputer Applications*	3
PL-1300	Civil Procedure	3
PL-1400	Basic Legal Research and Writing	3
PL-2030	Legal Nurse Consulting	2
PL-xxxx	Elective	2-3
		<b>13-14</b>
<u>Second Semester</u>		
PL-2301	Torts and Evidence	4
PL-2330	Advanced Medicolegal Research	3
PL-2430	Medical Record Review and Analysis	4
PL-2530	Marketing and Management for the Legal Nurse Consultant	1
		<b>13</b>
	<b>PROGRAM TOTAL</b>	<b>25-26</b>

\*May be waived with written departmental approval (student must have prior knowledge of word processing, spreadsheet, and database software).

Electives

- PL-1460 Worker's Compensation Law
- PL-2560 Advanced Litigation
- PL-2800 Special Advanced Topics in Paralegal Studies (i.e., Administrative Law, Elder Law)

**Massotherapy (General Massage Therapy)**

**Post-Degree Professional Certificate**

The post-degree professional certificate is for students who already have an associate or bachelor degree and want to become massotherapists. The program is high-quality instruction and meets the required number of hours for licensure in the State of Ohio. Program Manager - (216-987-2426). This program has specific admission requirements.

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>Program Admission Requirements</u>		
MT-1100	Introduction to Massotherapy	3
MT-1240	Fundamentals of Somatic Studies for Massage Therapists I *	4
		<b>7</b>
<u>First Semester</u>		
MT-1270	Fundamentals of Somatic Studies for Massage Therapists II *	4
MT-1301	Massotherapy I	3
MT-1310	Applied Musculo-Skeletal Anatomy	3
		<b>10</b>
<u>Second Semester</u>		
MT-1320	Functional Assessment in Massage Therapy	3
MT-1330	Massotherapy II	3
MT-2341	Massotherapy Practicum	3
		<b>9</b>
<u>Summer Semester</u>		
MT-2851	General Massage Practicum	3
MT 2990	Comprehensive Massotherapy	1
		<b>4</b>
	<b>PROGRAM TOTAL</b>	<b>30</b>

\*May be waived if student's transcript includes Anatomy and Physiology courses.

**Paralegal Studies**

**Post-Degree Professional Certificate**

This certificate program is for students who already have an associate or bachelor degree and want to become a paralegal. The program is designed to educate/train paralegals to work independently under the supervision of attorneys in all areas of law. Graduates are prepared for careers in law firms, insurance companies, government agencies, title companies and large corporations. Paralegals organize and manage the flow of work, generally in law offices, and handle routine legal documents in other office settings. They do background research and investigation for attorneys, research legal issues, interview and prepare witnesses and clients for depositions and court appearances. They prepare drafts of briefs or arguments, maintain files and letters about cases, organize, file and maintain case histories. They may conduct business with the police, other attorneys, government officials and the courts. Paralegals cannot accept a case, set fees, give legal advice or represent a client in court. This is an ABA approved program. Program Manager - Ms. Lisa O'Rear-Lassen (216-987-5112).

<b>Course No.</b>	<b>Course Title</b>	<b>Credit Hrs.</b>
<u>First Semester</u>		
PL-1000	Introduction to Paralegal Profession	2
PL-1300	Civil Procedure	3
PL-1400	Basic Legal Research and Writing	3
PL-2440	Business Transactions	3
PL-xxxx	PL Elective course*	2-3
		<b>13-14</b>
<u>Second Semester</u>		
PL-2301	Torts and Evidence	4
PL-2400	Computer Assisted Legal Research	3
PL-2420	Probate Law.....OR	3
PL-xxxx	Elective	
PL-2460	Business Organizations	3
PL-2851	Paralegal Practicum*	1
PL-2990	Paralegal Capstone	2
		<b>16</b>
	<b>PROGRAM TOTAL</b>	<b>29-30</b>

\*PL Electives (Select from the following):

PL-2540 Family Law

PL-2560 Advanced Litigation

PL-1460 Worker's Compensation Law

PL-2520 Debtor-Creditor Law

PL-1800 Special Topics in Paralegal Studies

\*\*May be waived with documentation of comparable or equivalent experience.