

www.CVTC.edu



We are futuremakers.



CVTC strives to provide a high quality education for all of our students. The quality of our instruction is the foundation for the quality of life we enjoy in our community. Our students and graduates make a difference in everyone's life every day.

Make a difference ... the CVTC way.

A handwritten signature in black ink that reads "Bruce A. Barker". The signature is written in a cursive, flowing style.

Bruce Barker
President, Chippewa Valley Technical College

2011-2012 Catalog

www.cvtc.edu

Chippewa Valley Technical College Campuses/Centers

EAU CLAIRE – CLAIREMONT CAMPUS

Business Education Center

620 West Clairemont Avenue
Eau Claire, WI 54701-6162
(715) 833-6200
(715) 852-1344 or (715) 833-6509 (TTY)
1-800-547-2882

Health Education Center

615 West Clairemont Avenue
Eau Claire, WI 54701
(715) 833-6417
(mail must be directed to 620 West Clairemont Avenue
Eau Claire, WI 54701-6162)

EAU CLAIRE – GATEWAY CAMPUS

Manufacturing Education Center

2320 Alpine Road
Eau Claire, WI 54703
(715) 874-4600
(mail must be directed to 620 West Clairemont Avenue
Eau Claire, WI 54701-6162)

NanoRite Innovation Center

2322 Alpine Road
Eau Claire, WI 54703
(715) 874-4655
1-866-399-6853
www.Nanorite.org
(mail must be directed to 620 West Clairemont Avenue
Eau Claire, WI 54701-6162)

EAU CLAIRE – WEST CAMPUS

Emergency Service Education Center

3623 Campus Road
Eau Claire, WI 54703
(715) 855-7500
(mail must be directed to 620 West Clairemont Avenue
Eau Claire, WI 54701-6162)

EAU CLAIRE – WEST CAMPUS (continued)

Transportation Education Center

4000 Campus Road
Eau Claire, WI 54703
(715) 855-7534
(mail must be directed to 620 West Clairemont Avenue
Eau Claire, WI 54701-6162)

CHIPPEWA FALLS CAMPUS

770 Scheidler Road
Chippewa Falls, WI 54729
(715) 738-3840
1-800-511-9095

MENOMONIE CAMPUS

403 Technology Drive East
Menomonie, WI 54751
(715) 232-2685
1-800-622-5011

NEILLSVILLE CENTER

11 Tiff Avenue
Neillsville, WI 54456
(715) 743-3965

RIVER FALLS CAMPUS

500 S. Wasson Lane
River Falls, WI 54022
(715) 425-3301
1-800-480-0997

Approved by the State Board of Wisconsin Technical College System (WTCS)

WTCS website: www.wtcsystem.edu

Institutional Member of the American Association of Community and Junior Colleges

Accredited by The Higher Learning Commission and member of the North Central Association of Colleges and Schools
North Central Association, 30 North LaSalle Street, Suite 2400, Chicago, IL 60602-2504; 312-263-0456 or 1-800-621-7440
www.ncahigherlearningcommission.org

This catalog is not a contractual relationship between Chippewa Valley Technical College and the student. Chippewa Valley Technical College reserves the right to make changes in the regulations and programs published in this catalog without obligation or prior notice. The administrative staff reserves the right to change curricula, regulations, and course offerings as published in this catalog during the period of any student's attendance. Changes will be made in the interest of the student body to update and improve programs and services. Visit the College website at www.cvtc.edu for the most comprehensive and up-to-date information.

College Directory

Campuses and Buildings	Phone
Eau Claire - Clairemont Campus	
• Business Education Center	715-833-6200
• East and West Annexes	
• Health Education Center	715-833-6417
Eau Claire - Gateway Campus	
• Manufacturing Education Center	715-874-4600
• NanoRite Innovation Center	715-874-4655 or 866-399-6853
Eau Claire - West Campus	
• Emergency Service Education Center	715-855-7500
• Transportation Education Center	715-855-7534
Chippewa Falls Campus	715-738-3840
Menomonie Campus	715-232-2685
Neillsville Center	715-743-3965
River Falls Campus	715-425-3301

Business Education Center	Room	Phone
Academic Services (ABE)	212	715-833-6400
Academic Services (Program Students).....	120Q.....	715-833-6201
Disability Services	120I.....	715-833-6234
Diversity Services	120F.....	715-833-6343
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• Housing Information.....	113	715-833-6267
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College Calendar

2011 Fall Term

August

Aug 24-25 Instructor Inservice
Aug 29 Classes Begin

September

Sep 5 Labor Day Holiday - College Closed

October

Oct 21 End of First 8 Weeks

November

Nov 24-25 Thanksgiving Holiday - College Closed

December

Dec 19 Last Day of First Semester Classes
Dec 20 Instructor Inservice
Dec 20 EC Graduation
Dec 23-26 Christmas Holiday - College Closed

2012 Spring Term

January

Dec 30 & Jan 2 New Year's Holiday - College Closed
Jan 11-12 Instructor Inservice
Jan 16 Classes Begin

March

Mar 9 End of First 8 Weeks
Mar 12-16 Spring Break

April

Apr 6 Spring Holiday - College Closed

May

May 10 Last Day of Second Semester Classes
May 11 Instructor Inservice
May 11 EC Graduation

2012 Summer Term

May

May 14- June 1 3-week Interim
May 28 Memorial Day Holiday - College Closed

June

Jun 4-Jul 27 8-week Summer Session

July

Jul 4 July 4th Holiday - College Closed
Jul 27 EC Graduation
Jul 30-Aug 21 4-week Interim

2012 Fall Term

August

Aug 22-23 Instructor Inservice
Aug 27 Classes Begin

September

Sep 3 Labor Day Holiday - College Closed

October

Oct 19 End of First 8 Weeks

November

Nov 22-23 Thanksgiving Holiday - College Closed

December

Dec 17 Last Day of First Semester Classes
Dec 18 Instructor Inservice
Dec 18 EC Graduation
Dec 24-25 Christmas Holiday - College Closed

2013 Spring Term

January

Dec 31 & Jan 1 New Year's Holiday - College Closed
Jan 9-10 Instructor Inservice
Jan 14 Classes Begin

March

Mar 8 End of First 8 Weeks
Mar 11-15 Spring Break

March

Mar 29 Spring Holiday - College Closed

May

May 9 Last Day of Second Semester Classes
May 10 Instructor Inservice
May 10 EC Graduation

2013 Summer Term

May

May 13-31 3-week Interim
May 27 Memorial Day Holiday - College Closed

June

Jun 3-Jul 26 8-week Summer Session

July

Jul 5 July 4th Holiday - College Closed
Jul 26 EC Graduation
Jul 29-Aug 20 4-week Interim

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Take Note

*** The Nanoscience Technology program is undergoing revision. It is tentatively planned to be offered again in August 2012.*

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College Overview

Chippewa Valley Technical College District

Eau Claire • Chippewa Falls • Menomonie • Neillsville • River Falls



Chippewa Valley Technical College is one of sixteen colleges in the Wisconsin Technical College System (WTCS).

Chippewa Valley Technical College District Board 2011-12

The District Board is responsible for establishing all college policies.

Colleen Bates, Elected Official Member

Gary Brummeyer, Additional Member

Francis Bucheger, Employer Member

Cheryl Gullicksrud, School District Administrator

Larry Hagness, Additional Member

Judith Kucera, Additional Member

Ramona Mathews, Employee Member

Gary Mitchell, Employer

Gwen Southard-Schuppel, Employee

The Vision of Chippewa Valley Technical College

Chippewa Valley Technical College will be a dynamic community partner dedicated to adding value through learning and student success.

The Mission of Chippewa Valley Technical College

Chippewa Valley Technical College delivers superior, progressive technical education which improves the lives of students, meets the work force needs of the region, and strengthens the larger community.

Purpose of the Catalog

The primary purpose of the annual catalog is to serve as the college's most consolidated printed source of program and course information and support services. The secondary purpose is twofold: used as a recruitment tool to present relevant information in a tone that is helpful as well as useful to potential CVTC students; and encourage prospects to visit the website at www.cvtc.edu for the most comprehensive and up-to-date information.

Affirmative Action Compliance Statement

Chippewa Valley Technical College, in compliance with state and federal law and district policy, prohibits discrimination or harassment on the basis of race, sex, color, national origin, religion, creed, ancestry, arrest or conviction record, marital status, parental status, veterans' status, pregnancy, sexual orientation, age, or disability. In compliance with the Americans with Disabilities Act of 1990, reasonable accommodations for persons with disabilities will be made to assure access to educational programs and employment. In addition, the district will ensure physical accessibility to programs and facilities.

Any student, job applicant, or employee has a right to file a complaint due to alleged discrimination or harassment under the district's Discrimination/Harassment Complaint Policy. Student complaints of discrimination or harassment should be directed to Mike Ojibway, Diversity/Equal Opportunity Specialist, by mail at 620 West Clairemont Avenue, Eau Claire WI 54701; by telephone at 715-833-6343; or by Email at mojibway2@cvtc.edu.

Job applicant or employee complaints of discrimination or harassment should be directed to Mary Casey, Equal Opportunity Officer, by mail at 620 West Clairemont Avenue, Eau Claire WI 54701; by telephone at 715-852-1377; or by Email at mcasey10@cvtc.edu.

Guaranteed Student Retraining

Chippewa Valley Technical College guarantees up to six free credits of additional instruction to graduates of programs of at least one year in length who do not obtain employment in their program or related area within six months of graduation. Call the Vice President-Education at 715-833-6500 for eligibility and retraining guidelines.

Student Profile

- Over 8,000 students enroll in credit courses each year.
- Half of CVTC students are under the age of 24. Students range in age from 16 to 74.
- The student body is 44% male and 56% female.
- The majority of CVTC students work part-time or not at all.
- Many students who work full-time take classes on a part-time basis.
- 77% of full-time, first-time degree-seeking students receive financial aid.

College Overview

General Education Mission Statement of Chippewa Valley Technical College

General Education is an integral part of all educational programs. General Education should reflect those competencies that comprise a level of skill needed to enable the individual to understand and appreciate his/her culture and environment; to develop a system of personal values based on accepted ethics that lead to civic and social responsibility; and to attain skills in analysis communication, quantification, and synthesis necessary for success in an occupational area and for further growth as a lifelong learner and a productive member of society.

Core Abilities of Chippewa Valley Technical College

In keeping with our institutional mission and vision, as well as the general education mission, Chippewa Valley Technical College promotes the development of nine key core abilities. These core abilities address the broad-based skills that will prepare a student to become a productive member of the work force, a civic-minded citizen of the community, and a life-long learner ready to grow with her/his chosen profession. The core abilities should enable the student to:

- Communicate effectively
- Think critically
- Behave ethically
- Cultivate global and cultural awareness
- Use mathematics
- Use science and technology
- Develop self-awareness
- Demonstrate social interaction
- Value environmental stewardship

These core abilities are woven throughout the student's avenue of study not becoming the sole responsibility of any one course but rather integrated into all curriculum as appropriate, thus building a strong base for academic and personal success. Specific competencies within every CVTC educational experience exhibit vital linkages supporting the development of these nine foundational skills. Consequently, the learning content offered, assessments encountered, and grades earned in every college learning transaction will reflect this common and equal concern with both core abilities and technical skills.

Demonstrating and documenting adequate progress in the linked core abilities together with the acquisition of technical skills enables CVTC graduates to meet employer expectations and benefit from true value-added educational training.

CVTC Strategic Goals

- CVTC will meet the dynamic and diverse employment and training needs of the region.
- CVTC will meet changing student educational needs.
- CVTC will enhance seamless transition for all students between educational systems in Wisconsin.
- CVTC will be fiscally and organizationally healthy.

Business & Industry Services

Customized Training

Along with the high-quality education we provide to the students in our programs, CVTC also works closely with employers in our district to ensure their employees have the necessary skills for success. CVTC prides itself in providing customized training and technical assistance services for employers. We welcome a training partnership with your business or organization.

CVTC will bring customized training right to your organization at a time that is most convenient and productive. CVTC training held on-site at your company or organization can help you save time and money resulting in higher skills and more productive employees. There are many benefits to partnering with Chippewa Valley Technical College for your training needs. CVTC instructors have PROVEN expertise in the field they are teaching. After successful completion of training with CVTC, participants may receive official credentials of their training on a CVTC transcript.

Contact us today to learn more!

- Call: 1-800-547-CVTC, ext. 4676
- E-Mail: businessindustry@cvtc.edu
- Visit our website: www.cvtc.edu/businessandindustry

Professional Development Seminars

CVTC offers professional development seminars that assist individuals in gaining the skills they need to become or remain successful in the workforce. After successful completion of a professional development seminar, participants will receive official credentials of their training on a CVTC transcript in addition to Continuing Education Units (CEUs).

If you are interested in learning more about our Professional Development Seminars:

- Call: 1-800-547-CVTC, ext. 4676
- E-Mail: businessindustry@cvtc.edu
- Visit our website: www.cvtc.edu/seminars

PROVEN.
Impact

Flexible Learning Opportunities

E-Learning = Online, Hybrid, and Web Conferencing Courses

CVTC E-Learning options provide the ultimate in flexibility through anywhere, anytime, online or hybrid delivery of courses and instructional programs. Courses are taught using Blackboard, a user-friendly secure website where you access course materials, participate in online discussions, and complete tests and assignments. For more information about E-Learning, visit www.cvtc.edu/waysoflearning.

Chippewa Valley Technical College currently offers over 170 E-Learning courses. For a complete listing of current offerings, please call 1-800-547-2882 or visit our website at www.cvtc.edu/courses.

How it Works - Online Courses

Online learning is the ultimate in FLEXIBILITY! You can participate from home, school, or your local library – anywhere with a computer and internet access. Never set foot in a classroom while entering the wonderful world of flexible learning:

- 100% of learning is online (some classes require proctored exams).
- interact with the instructor and fellow classmates via Blackboard, a “virtual classroom.”
- requires a high degree of self-motivation.
- time management skills are critical to success as there will be due dates for assigned work.

How it Works - Hybrid Courses

Hybrid learning is flexible and exciting! Hybrid courses work well for motivated learners who find it a challenge to attend frequent traditional classes. Willingness to participate in both face-to-face and virtual environments is crucial to success in this learning environment.

- Hybrid courses pair the best features of face-to-face teaching with quality online learning:
- typically one half of the course is online and one half is in a classroom or lab.
- active and independent learning is promoted.
- time on campus is reduced.
- self-motivation is essential.
- commitment using new instructional technologies is critical.

How it Works - Web Conferencing

Web conferencing is flexibility with a twist! It’s like a face-to-face course, but students can attend class on or off campus. Course instruction is conducted with the use of Microsoft Live Meeting, which is an online collaboration (web conferencing) tool that instructors use to present course materials. This online classroom provides the following benefits:

- participants watch and listen to the lecture using a computer that can be located anywhere as long as it meets the hardware and software requirements of web conferencing (i.e., high-speed Internet connection, Microsoft Live Meeting software, headset with microphone). Note: instructors may require you to be on campus for assessments.
- students and instructor communicate by voice, text chat, and question and answer interaction.
- students and instructor can draw, add text, and highlight information using annotation tools.
- instructor and students can view one another using a webcam.

Business Technology Open Labs

The college provides a location where students have access to computers and the software necessary for Business Technology classes at CVTC. The labs in Eau Claire and River Falls offer classes in a flexible learning environment with instructor-staffed support. Students are expected to complete assignments and tests by the posted due dates and are encouraged to attend the lab when it is convenient for them or when they require assistance from an instructor. Most open lab classes do not require attendance; if attendance is required, it will be noted in the course description. Staffed and unstaffed lab hours will be posted outside the labs and on Blackboard and will vary by location.

Business Technology Labs are located at the following campuses:

- Chippewa Falls Campus
- Eau Claire Business Education Center
- Menomonie Campus
- River Falls Campus
- Neillsville Campus

You may be able to complete your course work on your home computer. We use a technology called Citrix that gives you access to your network storage space, Microsoft Office Suite, and other program software.

Continuing Education for the Work Force

Global competition has increased the significance of well-trained workers to the economic viability of companies in the Chippewa Valley.

CVTC provides educational opportunities at a variety of times and locations so workers can acquire the knowledge and skills they need to compete in a global economy.

Examples of these opportunities are customized training, technical assistance, seminars, entry-level job training, satellite conferences, workplace training, and video-based interactive computer training. For more information, call 715-833-6496 or visit the CVTC website at www.cvtc.edu/businessandindustry.

Academic Services

(Offered in Chippewa Falls, Eau Claire, Menomonie, Neillsville, River Falls)

Program Description

The Academic Services Center is a walk-in facility that provides academic instruction and services. Learning materials and one-to-one instruction are provided by qualified instructional personnel. In addition, peer tutoring is available for enrolled students requiring help with general education and degree specific classes.

Services Offered

Homework Help

The Academic Services team can help you with coursework such as daily assignments or class projects.

Peer Tutoring

Peer tutoring is designed to help students succeed. Students meet twice a week with a peer who has successfully completed the course or are currently enrolled in the class.

Assessment

Academic Services is available to help students prepare to take placement tests such as TABE, Accuplacer, and COMPASS®. Assessment may be completed at an Academic Services Center. Call a center to arrange for your required assessment.

Developmental Courses

These courses are available for those students who need additional help in their coursework or who are preparing to enter college and need to strengthen their skills in specific areas.

Study Skills

Learn to develop skills such as reading a textbook effectively, test taking, improving concentration and memory, and note taking.

Adult Based Education (ABE)

The Academic Services Center offers Adult Based Education (ABE) as a walk-in facility that provides academic instruction and services. Learning materials and one-to-one instruction are provided by qualified instructional personnel. These services will help:

- Improve academic skills (math, reading, writing)
- Enhance computer literacy (keyboarding, word processing, internet)
- Assist with job preparation and advancement (interviewing, resume and cover letter, job search)
- Prepare for placement exams (TABE, Accuplacer, or the COMPASS®)

Services for Community Members

Academic Services also offers services to members of the community who are not enrolled in a program or courses at CVTC.

Job Seeking Skills

Get assistance with job-seeking skills and resources such as a cover letter or resume. We can also help you develop basic technology skills.

ESL Students

Students who desire to improve their second language skills (English) may receive specialized instruction in our ESL classes. ESL students receive a comprehensive assessment in language, math, and reading.

ESL/ELL

We offer English language classes for adults over 18 who are legalized aliens, refugees, immigrants, or U.S. citizens. These classes can help you:

- Get a better education
- Get a better job
- Become more independent
- Communicate with your children, teachers, doctors, and people in the community
- Prepare for a citizenship exam, drivers license exam, or employment or job advancement.

ESL and ELL can also help you prepare for admission into a CVTC program and help you prepare for the COMPASS® test.

GED/HSED

The General Educational Development Certificate (GED) offers people who did not finish high school the opportunity to earn high school credentials. Over 90 percent of U.S. employers and colleges accept the GED in place of a traditional diploma.

The High School Equivalency Diploma (HSED) is more comprehensive than the GED. In addition to taking the GED, candidates must meet further requirements related to coursework in health, civic literacy, and employability skills.

CVTC offers Academic Services for those needing assistance preparing to take the GED/HSED tests. GED/HSED preparation is available at CVTC Learning Centers in five communities:

- Eau Claire
- Chippewa Falls
- Menomonie
- River Falls
- Neillsville

Academic Services Centers

Chippewa Falls Campus*

Room 105
770 Scheidler Road
Chippewa Falls, WI 54729
(715) 738-3845

Eau Claire Clairemont Campus*

Academic Services Lab
Room 120 - The Learning Center
620 West Clairemont Avenue
Eau Claire, WI 54701
(715) 833-6201

Eau Claire Clairemont Campus

Adult Basic Education (ABE) and English Language Learner (ELL)
Room 212
620 West Clairemont Avenue
Eau Claire, WI 54701
(715) 833-6400

Menomonie Campus*

Room 103
403 Technology Drive E.
Menomonie, WI 54751
(715) 233-5344

Neillsville Center*

Room 102
11 Tiff Avenue
Neillsville WI 54456
(715) 743-3965

River Falls Campus*

Room 105
500 S. Wasson Lane
River Falls, WI 54022
(715) 426-8208

* These centers offer COMPASS® testing (CVTC admissions assessment test)

Offered in Eau Claire • August and January entry dates

10-101-1

If you enjoy working with numbers, have an interest in business, and are searching for a career path full of opportunity, the Accounting program may be right for you. Accounting is often referred to as the language of business. In this program, you will learn to record and interpret business data. You'll develop analytical skills that will enable you to seek a career as an accountant, controller, account receivable/payable clerk, tax preparer, payroll specialist, and office manager.

Computerized applications are incorporated to reflect current industry practices. You'll be prepared to

- Set up and maintain accounting records and systems.
- Analyze financial records.
- Prepare individual and small business tax returns.
- Prepare monthly and year-end financial reports.
- Calculate, record, and make require payroll deposits and filings.

Accounting is a high growth area. According to the Bureau of Labor Statistics, employment of accountants and auditors is expected to

grow faster than the average for all occupations through the year 2016. Accounting graduates are eligible to take the Accreditation in Accountancy (ABA) and/or an Enrolled Agent (EA) exam to further support your educational background. There are many opportunities when you have an accounting degree. You have options!

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment
80 on Reading
45 on Pre-Algebra

Helpful Background

- High school accounting
- Computer literacy
- Mathematics

Career Opportunities

- Accounts Payable/Receivable Specialist
- Payroll Accountant
- Cost Accountant
- Governmental Accountant
- Public Accountant
- Staff Accountant
- Tax Preparer



2009-10 Employment Facts

Average Hourly Wage \$14.23
Average Monthly Income \$2448.99

Employers

Alliance Collection Agencies, Inc.; Marshfield, WI
American Red Cross Chippewa Valley Chapter; Altoona, WI
Brown Dog Trucking; Menomonie, WI
Clark County; Neillsville, WI
Claude M. Anderson; St. Paul, MN
Country Jam USA; Eau Claire, WI
EO Johnson Co.; Eau Claire, WI
Farmers Insurance; Cadott, WI
Harmon Solutions Group; Eau Claire, WI
Marten Transport; Mondovi, WI
Mega Foods; Eau Claire, WI
RunvaUSA; Menomonie, WI
Schwan's Consumer Brands of North America; Bloomington, MN
Sentry Insurance; Stevens Point, WI

First Term	Credits
+ • 101-111 Accounting I.....	4
+ • 101-121 Payroll Accounting.....	2
+ 103-102 Microsoft Office Suite.....	2
+ * 801-195 Written Communications.....	3
Choose 1 course(s) from the following:	
+ * 804-123 Math w Business Apps.....	3
* 804-189 Introductory Statistics.....	3
Choose 1 course(s) from the following:	
+ * 809-122 Intro to Amer Government.....	3
+ * 809-197 Contemporary Amer Society.....	3
Total Credits.....	17

Second Term	Credits
+ *• 101-106 Acctg Spdsheets & Calculations.....	2
+ *• 101-113 Accounting II.....	4
+ *• 101-150 Accounting Software Apps.....	3
+ 102-160 Business Law.....	3
+ * 801-196 Oral/Interpersonal Comm.....	3
+ * 801-198 Speech.....	3
Total Credits.....	18

Third Term	Credits
+ *• 101-116 Intermediate Accounting I.....	4
+ *• 101-123 Income Tax I.....	4
+ *• 101-125 Cost Accounting.....	3
+ * 809-198 Intro to Psychology.....	3
Choose 1 course(s) from the following:	
+ *• 101-133 Acctg for Govt & Nonprofit Entities.....	2
• 101-134 Personal Financial Planning.....	2
Total Credits.....	16

Fourth Term	Credits
+ *• 101-117 Intermediate Accounting II.....	4
+ *• 101-118 Managerial Accounting.....	3
+ *• 101-131 Accounting Systems.....	3
*• 101-160 Accounting Internship.....	2
+ * 809-195 Economics.....	3
Choose 1 course(s) from the following:	
*• 101-126 Income Tax Preparation.....	2
+ *• 101-127 Auditing.....	2
Total Credits.....	17

- + *May be offered as distance learning*
- * *Prerequisite required; see course description*
- *A grade of "C" or better is required*

Minimum Program Credits Required - 68

Short-Term Training Certificate(s)

- (TC-101-1) Small Business Accounting, 13 Credits

For a complete listing of course descriptions see back of catalog.

101-106 Acctg Spdsheets & Calculations

This course introduces students to the touch method for ten-key calculators. Students are also introduced to intermediate Excel concepts with accounting applications. Students will utilize a variety of financial, analysis, and database functions as they create, format, and modify worksheets in Excel. Prerequisite(s): 101-111 Accounting I and 103-102 Microsoft Office Suite.

101-111 Accounting I

This course prepares the learner to analyze, record, summarize and interpret accounting information. This course focuses on business transactions, financial statements, merchandising business transactions, special journals, internal controls, receivables and plant assets. The learner will prepare accounting transactions for a practice set, including month-end transactions and preparation of the financial statements.

101-113 Accounting II

This course presents basic concepts for partnerships and corporations. It introduces current liabilities, bonds, cash flow statement preparation, financial statement analysis, cost-volume profit, and budgeting. The course includes a practice set in which the student records transactions, records adjusting entries, and prepares financial statements for a corporation. Prerequisite(s): 101-111 Accounting I.

101-116 Intermediate Accounting I

This course requires the learner to apply accounting information to make business decisions. The course builds upon previously learned accounting principles and stresses a more complex application of these principles. Prerequisite(s): 101-113 Accounting II.

Notes

Administrative Professional

Associate Degree
Two Years

*Offered in Eau Claire and River Falls • August and January Entry Dates in Eau Claire
August entry date in River Falls*

10-106-6

If you would like to be a vital part of an office, the Administrative Professional program is for you. This career area needs skilled people with highly-developed personal strengths:

- Confidence and poise
- Ability to deal with confidential matters
- Good oral and written communication skills
- Ability to project a professional image
- Good judgment in resolving problems
- Good organizational and time management skills
- Able to work with people from diverse backgrounds
- Able to work individually and as a member of a team

In the Administrative Professional program, you'll learn to use the most current word processing, spreadsheet, database, and presentation software – all important to your career. Your responsibilities on the job could include a wide range of tasks:

- Design, create, update, and maintain various forms of media
- Interpret and analyze data for decision making

- Communicate in person and through e-mail
- Website design principles
- Access information from the Internet
- Present information to assist in decision making
- Create and use multimedia and graphics
- Prepare financial documents

In the final part of your program, you'll gain valuable work experience in a local business office while completing your administrative professional internship.

Employment opportunities are expected to increase in educational services, healthcare, and professional offices, including law firms. Employment opportunities are best for people who know how to use business-related software and operate various machines used in professional offices. The Administrative Professional program offers you the training you need!

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment
- Keyboarding assessment
- Computer Literacy Assessment

Helpful Background

- Outgoing and enjoy working with people
- Detail-oriented with good organizational skills
- Computer skills
- Related business courses

Career Opportunities

- Administrative Assistant
- Executive Assistant
- Information Coordinator
- Office Manager
- Program Assistant

2009-10 Employment Facts

Average Hourly Wage \$14.67

Average Monthly Income \$2542.55

Employers

American Family Insurance Casey L. Berube Agency; Eau Claire, WI
Aurora Community Services; Menomonie, WI
CVTC; Eau Claire, WI
Dunn County Solid Waste; Menomonie, WI
Luther Midelfort Oakridge; Mondovi, WI
Luther Midelfort Oakridge; Osseo, WI
Marten Transport; Mondovi, WI
Memorial Medical Center; Neillsville, WI
Securian Financial Group; St. Paul, MN
Superb Trucking, LLC; Menomonie, WI
The Stenzel Clinic; Eau Claire, WI
United Parcel Service; Baldwin, WI
Wisconsin Bench; Thorp, WI
Workforce Resource; Menomonie, WI



First Term		Credits
+	103-102 Microsoft Office Suite	2
+ *	106-105 Business Words at Work	3
	106-119 eSkillbuilding	1
+	106-132 Exploring Office Environments	2
+	106-140 Office Procedures	3
+	106-146 Quality Customer Service	2
	106-163 Computer Success	2
Choose 1 course(s) from the following:		
+ *	809-198 Intro to Psychology	3
+ *	809-199 Psychology of Human Relations	3
Total Credits.....		18
Second Term		Credits
+	106-101 Business Technology & Trends	2
+ *	106-164 Business Presentations & Publ	3
+ *	106-171 Adv Software Applications	3
+	106-172 Office Communication	2
+ *	801-196 Oral/Interpersonal Comm	3
+ *	809-172 Race Ethnic & Diversity	3
Total Credits.....		16
Third Term		Credits
+	106-158 Meeting & Event Planning	2
+	106-173 Web Technologies	3
+ *	106-174 Business Software Solutions	3
+ *	804-123 Math w Business Apps	3
Choose 1 course(s) from the following:		
+	102-111 Human Resources, Intro to.....	3
+	106-162 Legal Terminology	3
+	501-101 Medical Terminology	3
Choose 1 course(s) from the following:		
+ *	804-123 Math w Business Apps	3
*	804-189 Introductory Statistics	3
Total Credits.....		17
Fourth Term		Credits
*	106-138 Office Internship.....	2
+ *	106-175 Admn Professional Development	2
*	809-166 Intro to Ethics: Theory & App	3
+ *	809-195 Economics	3
Choose 2 credits from the following:		
+	102-112 Principles of Management	3
+	106-141 Computer Applications-Legal	3
+	530-103 Medical Insurance & Billing	2
Choose 3 credits from the following:		
+	101-105 Accounting, Intro to	4
+	101-111 Accounting I	3
Total Credits		15

+ *May be offered as distance learning*
 * *Prerequisite required; see course description*

Minimum Program Credits Required - 66

Short-Term Training Certificate(s)

- (TC-106-10) Software Specialist, 11 Credits
- (TC-106-5) Records & Info Mgmt Specialist, 15 Credits
- (TC-106-6) Customer Service Rep, 11 Credits

For a complete listing of course descriptions see back of catalog.

103-102 Microsoft Office Suite

The goal of this course is to provide an opportunity for students to use Microsoft Office 2007 as it is utilized in academic and business environments. Students will become familiar with the Office 2007 interface and use it as they work with Word, Excel, Access, and PowerPoint.

106-101 Business Technology & Trends

This course provides students with exposure and/or experience in using a variety of technologies used in today's office. The content focuses on understanding these technologies and how they impact office employees.

106-132 Exploring Office Environments

This course introduces various aspects of administrative professional careers. Topics explored will include career expectations and responsibilities, employment opportunities, and career planning. Students will explore the role of Administrative Professionals in industries such as contact centers, educational institutions, government agencies, insurance companies, legal firms, manufacturing corporations, medical businesses and public safety organizations. Exploration of industries will take place during off-campus events and/or on-campus presentations.

106-158 Meeting & Event Planning

This course focuses on preparing the learner to plan all components of a conference, coordinate business meetings, and plan successful business events. Event topics include all aspects of the event management process: goal setting and objectives, establishing and event theme, planning event logistics, facility set up, travel planning, follow-up activities, and international considerations. This course will also help students learn to use and apply project management tools such as MS Project to aid a business in defining, planning, controlling, and scheduling projects.

Notes

Agriscience Technician

Associate Degree
Two Years

Offered in Eau Claire • August and January entry dates

10-006-3

If you're interested in a career in agriculture, consider the Agriscience Technician program. You select the courses you need for the area that appeals to you.

The Agronomy/Conservation Planning emphasis can lead to a variety of careers:

- Farm supply business agronomy department
- Custom application of pesticides and fertilizers
- Mix, load, tender chemical/fertilizer deliveries
- Develop nutrient, pest management programs
- Identify pest problems
- Promote and demonstrate agronomic products
- Maintain inventory
- Lab technician
- Crop scout
- Certified custom applicator
- Crop production specialist

The Animal Science emphasis can lead to careers working with animals or assisting livestock owners in maintaining herd health:

- Livestock or dairy herd manager
- Livestock management technician
- Sales/service representative
- AI technician
- Dairy/Livestock nutritionist

Associate degree program graduates may progress into serving as the manager of a fertilizer/chemical plant or branch location, or district product representatives. This could be the training you need for a rewarding career in the agriculture emphasis of your choice!

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment

Helpful Background

- Agriculture experience
- Science courses
- Basic computer skills
- Economics courses

Career Opportunities

- Crop Scout
- Certified Custom Applicator
- Crop Production Specialist
- Lab Technician
- Livestock Consultant
- Livestock/Dairy Herd Manager
- Livestock Nutritionist
- Nutrient Management Planner
- Sales/Service Representative

2009-10 Employment Facts

Average Hourly Wage \$11.73

Average Monthly Income \$2932.00

Employers

Accelerated Genetics
Countryside Co-op
Farm Service Agency
Blacks Valley Ag
Cenex/CRI
Land Conservation Department
Natural Resources Conservation Service
North Star Co-op
Select Sire



First Term	Credits
006-116 Introductory Soils	3
006-123 Agriculture Equipment	3
006-180 Animal Science.....	3
+ 103-102 Microsoft Office Suite	2
+ * 801-195 Written Communications	3
804-107 College Mathematics	3
Elective.....	2
Total Credits.....	19

Second Term	Credits
006-110 Genetics.....	1
006-138 Principles of Ag-Products Mktg.....	3
006-151 Plant Protection Products	2
006-161 Weed Identification	2
007-111 Applied Biotechnology	2
* 806-134 General Chemistry.....	4
Choose 1 course(s) from the following:	
006-160 Plant Science	3
006-182 Animal Reproduction	3
Elective	2
Total Credits	20

Third Term	Credits
006-190 Agriscience Internship.....	3
Choose 1 course(s) from the following:	
006-164 Plant Pathology and Entomology	2
006-184 Herd Health & Sanitation	2
Total Credits.....	5

Fourth Term	Credits
006-120 Livestock Computer Apps	2
006-122 Agriculture Facilities	2
006-130 Agribusiness Financial Mgmt.	2
006-140 Agribusiness Sales.....	3
+ * 809-195 Economics.....	3
Choose 1 course(s) from the following	
006-114 Legal Aspects of Agriscience.....	2
006-168 Row Crop Management	2
006-192 Farm Business Spanish.....	2
Choose 1 course(s) from the following	
006-162 Soil Fertility and Fertilizers	2
006-188 Feed Analysis	2
Total Credits.....	16

Fifth Term	Credits
+ * 809-198 Intro to Psychology	3
Choose 1 course(s) from the following:	
006-166 Computer Applic-Agronomy	2
006-186 Managing Youngstock & Dry Cows	1
Choose 1 course(s) from the following:	
006-169 Forage Crop Management	2
006-189 Ration Formulation	2
Choose 1 course(s) from the following:	
+ * 809-196 Intro to Sociology	3
+ * 809-199 Psychology of Human Relations	3
Choose 1 course(s) from the following:	
+ * 801-196 Oral/Interpersonal Comm	3
+ * 801-198 Speech	3
Total Credits.....	12

(See next column)

+ *May be offered as distance learning*
 * *Prerequisite required; see course description*

Minimum Program Credits Required - 68

For a complete listing of course descriptions see back of catalog.

006-114 Legal Aspects of Agriscience

Contractual agreements; consumer rights and responsibilities; hazardous materials handling; hiring and protection of employees; debt collection; related government agricultural policy and programs; insurance needs.

006-116 Introductory Soils

Provides fundamental knowledge of soils and growth media. Course topics include soil formation and development, soil components, soil profile, soil classification, and soil conservation. Participants will experience soil concepts through the completion of hands-on activities.

006-120 Livestock Computer Apps

This course will apply the use of livestock management software, database management software, spreadsheets and specialized on-farm applications.

006-122 Agriculture Facilities

Livestock building design, drying grain, forage crops; movement and storage of grains, forages, and manure storage.

006-123 Agriculture Equipment

This course provides fundamentals of calibration and maintenance of planting, seeding, harvesting, and milking equipment, including emphasis on precision agricultural concepts. By the end of the course, participants will have the skills and knowledge to operate, maintain, and calibrate precision agriculture equipment components.

006-130 Agribusiness Financial Mgmt.

This course focuses on the financial management of farm and agriculture-related businesses. Special emphasis is given to the areas of business types and systems, tools for making financial decisions, financial statement analysis, budgeting business operating and capital expenses, obtaining credit, depreciation, and other business tax concerns.

Notes

Offered in Eau Claire • August and January entry dates, and selected evening courses.

10-601-1

This is a program and career area that draws on your mechanical ability and analytical skills and offers excellent employment opportunities – including career advancements in many HVAC/R- and energy-related occupations. The Air Conditioning, Heating, & Refrigeration Technology (ACHR) program prepares you for careers designing, installing, and maintaining air conditioning, heating, and refrigeration equipment. You'll also learn how to work with geothermal, solar, and other renewable energy equipment.

The first semester of instruction serves as an introduction to the industry, with information on gas, oil, and electric furnaces; basic refrigeration and air conditioning systems; renewable energies; and principles of ACHR electricity.

The rest of your program will focus on specific applications:

- Geothermal systems, hydronics, and solar heating
- Print reading
- Load calculations
- Solving technical problems

- CAD
- Air handling system design and installation
- Advanced temperature controls
- HVAC systems design and drafting

After you graduate, you will be prepared to take the Environmental Protection Agency (EPA) Certification Exam for safe handling of refrigerants. The Industry Competency Exam (ICE) sponsored by the Air Conditioning and Refrigeration Institute for HVAC/R technicians is a requirement for all students.

Nationally there is a shortage of design, installation, and maintenance technicians, and an increasing need for technicians trained to work with alternative energy systems. This could be the program you need to launch your career

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment

Helpful Background

- One year high school algebra or equivalent with a passing grade of “C” or better is strongly recommended
- Physics
- Computer-Aided Drafting
- Electricity

Career Opportunities

- HVAC Designer
- Estimator
- Sales Representative
- Research and Development Technician
- Field Service and Installation Technician

2009-10 Employment Facts

Average Hourly Wage \$11.61

Average Monthly Income \$2263.99

Employers

Christie Heating and Cooling; Eau Claire, WI
Comfort Air; Wisconsin Rapids, WI
MEP Associates; Colorado Springs, CO
Tonna Mechanical Inc; Rochester, MN
Vantage Refrigeration; Marshfield, WI



First Term		Credits
	601-125 Safety-HVAC	1
*	601-110 Principles of Heat & Air Flow	4
*	601-111 Principles of Refrigeration	2
	601-115 Renewable Energies for HVAC	1
*	601-116 Principles of Air Conditioning	2
	601-141 Electricity-HVAC.....	3
+ *	801-195 Written Communications	3
*	804-113 College Technical Math 1A	3
	Total Credits.....	19
Second Term		Credits
	601-114 Plan & Print Reading	2
	601-119 Hydronic/Geothermal Systems Design	3
	601-120 Geothermal/Solar Applications	2
	601-130 Sheet Metal Layout	1
*	601-142 Schematic Wiring-HVAC	2
	601-161 HVAC Load Calc & Psychometric	3
*	804-114 College Technical Math 1B	2
+ *	809-199 Psychology of Human Relations.....	3
	Total Credits.....	18
Third Term		Credits
*	601-112 Principles of Air Handling	4
*	601-143 Advanced HVAC Controls.....	3
*	601-165 CAD - HVAC	3
*	806-143 College Physics 1	3
+ *	809-195 Economics.....	3
	Total Credits.....	16
Fourth Term		Credits
*	601-113 HVAC Systems Design	3
*	601-117 Drafting-HVAC.....	2
	601-118 Sustainability for HVAC.....	2
*	601-151 Technical Problems-HVAC	3
+ *	801-197 Technical Reporting.....	3
+ *	809-197 Contemporary American Society.....	3
	Total Credits.....	16

+ *May be offered as distance learning*
 * *Prerequisite required; see course description*

Minimum Program Credits Required - 69

For a complete listing of course descriptions see back of catalog.

601-110 Principles of Heat & Air Flow

Gas, oil, and electric heating systems are evaluated and tested. Major components and controls of each heating system are detailed. Operation, service and maintenance are performed on a variety of heating systems. Evaluating the proper airflow patterns for a variety of applications is emphasized. The main objective is to assist the technician to work on a variety of heating systems once the course is completed. Prerequisite(s): 601-141 Electricity-HVAC (or taken concurrently).

601-111 Principles of Refrigeration

The purpose of the course is to assist the student in developing and understanding of the basic refrigeration system. Proper use of tools and test equipment for installation and servicing of domestic and commercial refrigeration systems is covered in detail. Soldering, Brazing and flaring of coppertube systems is an essential skill developed in this course. The safe handling of refrigerants along with EPA refrigerant handling certification is a priority. Prerequisite(s): 601-141 Electricity-HVAC (or taken concurrently) or 401-351 Basic Electricity HVACR.

601-112 Principles of Air Handling

The purpose of this course is to inform the student about air and analyzing its properties. The study of fans, fan laws, system balancing, duct layout and sizing is detailed. The students are given the opportunity to work on a variety of air handling systems. Prerequisite(s): 601-110 Principles of Heat & Air Flow and 601-161 HVAC Load Calc & Psychometric.

601-113 HVAC Systems Design

In this course the student designs air conditioning, heating, and ventilation systems for commercial buildings. The building may be an office building, school, hotel, etc. The student performs room by room load calculations, duct layout and pipe sizing, and equipment selection. This course runs concurrently with Drafting HVAC (601-117). They system is designed in accordance with the International Code as modified by the state of Wisconsin Prerequisite(s): 601-112 Principles of Air Handling and 601-161 HVAC Load Calc & Psychometric. Co-requisite(s): 601-117 Drafting-HVAC.

Notes

**Air Conditioning, Heating,
& Refrigeration Technology**

Offered in Eau Claire • August entry date

10-550-1

If your healthy lifestyle includes low-risk choices regarding substance use, the ability to work independently and within a team, and a desire to use your written and oral communication skills to help others, the Alcohol & Other Drug Abuse Associate program could be the career training for you.

AODA associates are held to high ethical standards to inspire respect, trust, and confidence. Your conduct must never compromise your ability to fulfill your professional responsibilities. To succeed, your skills and character must include

- Emotional stability, maturity, self-awareness, self-discipline, and personal responsibility.
- A minimum of six months free of substance use-related problems
- An interest in working with people and appreciation of cultural diversity.
- Strong reading, writing, and abstract thinking skills.

This program offers you opportunities to learn skills you'll use every day in your career:

- Clinically evaluate for substance use disorders and treatment needs
- Facilitate referral to meet needs
- Demonstrate case management skills
- Demonstrate counseling skills with individuals, groups, and families
- Provide culturally relevant education related to substance use
- Document and maintain clinical records per agency, federal and state guidelines
- Adhere to accepted ethical and behavior conduct

Program graduates are licensed in Wisconsin as Substance Abuse Counselors-In Training, qualifying for entry-level employment in a rewarding career.

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment
80 on Reading
- Wisconsin criminal background check (requires a processing fee).
Note: A record of specified criminal offenses may bar or restrict an individual from coursework involving a clinical/practicum experience and/or future employment in this occupation.
- A pre-entrance health history and physical examination must be on file three weeks before you enter the core courses of the AODA program. The Admissions Office will notify you at the appropriate time.

Helpful Background

- Strong reading comprehension and writing skills
- Strong social and behavioral sciences
- Critical thinking and problem-solving skills
- Computer literacy

If you begin this program, you must abide by the substance abuse counselor code book, Chapters RL 164, established by the Wisconsin

Department of Regulation and Licensing. Understanding the code is very important; if you violate the code, you will be dismissed from the program. You can find a copy of the code at Department of Regulation and Licensing.

Career Opportunities

- AODA Counselor
- Substance Abuse Counselor
- Chemical Dependency Counselor

2009-10 Employment Facts

Average Hourly Wage \$13.09
Average Monthly Income \$2187.05

Employers

9AM; Madison, WI
Affinity House; Eau Claire, WI
Arbor Place; Menomonie, WI
Burkwood Treatment Center; Hudson, WI
Community Counseling Services; Chippewa Falls, WI
Duluth Bethel; Duluth, MN
Eau Claire Academy; Eau Claire, WI



First Term	Credits
• 550-108 Substance Use: Risk & Reality.....	3
• 550-113 Intro to Prev & Trtmt Profession.....	3
• 550-114 Ethics & Public Policy.....	3
+ * • 801-195 Written Communications.....	3
+ • 801-196 Oral/Interpersonal Comm.....	3
+ * • 809-198 Intro to Psychology.....	3
Total Credits.....	18

Second Term	Credits
* • 550-102 AODA Counseling/Interviewing.....	3
* • 550-110 Theories & Methods of AODA Trt.....	3
* • 550-154 Culturally Skilled Counseling.....	3
* • 550-161 AODA and Corrections.....	3
+ * • 801-197 Technical Reporting.....	3
+ * • 809-188 Developmental Psychology.....	3
Total Credits.....	18

Third Term	Credits
Choose 3 credits from the following:	
* • 806-177 Gen Anatomy & Physiology.....	4
* • 806-189 Basic Anatomy.....	3
Total Credits.....	3

Fourth Term	Credits
* • 550-104 Internship I.....	2
* • 550-111 Group Facilitation.....	2
* • 550-115 AODA Assess & Treatment Plng.....	3
* • 550-121 Info Mgmt for Prev & Treatment.....	2
* • 550-122 Pharmacology-Substance Abuse.....	3
* • 550-160 Psychiatric Disease and AODA.....	3
+ * • 809-196 Intro to Sociology.....	3
Total Credits.....	18

Fifth Term	Credits
* • 550-106 Internship Advanced I.....	3
• 550-107 Internship Advanced II.....	3
* • 550-120 Family & Community Systems.....	3
• 550-150 Issues-Internship II Seminar.....	3
Total Credits.....	12

- + *May be offered as distance learning*
- * *Prerequisite required; see course description*
- *A grade of "C" or better is required*

Minimum Program Credits Required - 69

For a complete listing of course descriptions see back of catalog.

550-102 AODA Counseling/Interviewing

Introduction and application of basic counseling/communication micro-skills used in individual and group therapy. Miller’s Motivational Interviewing is the foundation for utilizing these skills with substance use disorder patients. Learners will record and critique practice in the lab setting and must demonstrate effective counseling skills. Prerequisite(s): 550-113 Intro to Prev&Trtmt Profession and 550-114 Ethics & Public Policy and 801-196 Oral/Interpersonal Comm and 809-198 Intro to Psychology and 550-108 Substance Use: Risk & Reality.

550-104 Internship I

Learners spend eight hours per week over 16 weeks (total 128 hours) at a clinical site to observe, and get some introductory practice in the substance use disorder counselor eight practice dimensions (the basic tasks and responsibilities that constitute the work of a substance use disorder counselor), and 12 core functions (the observation and practice of skills while treating substance use disorder patients under the close supervision of a clinical supervisor). Learners read agency policies and procedures, document clinical hours, develop a learning plan, submit weekly clinical notes on progress toward plan goals, complete written assignments and tests, engage in discussion, and demonstrate core function knowledge and professionalism and employability skills. Eight hours are allocated for on-campus seminars held throughout the internship. Learners apply for the Wisconsin entry-level SAC-IT license near the end of the course. Prerequisite(s): 550-102 AODA Counseling/Interviewing and 550-161 AODA and Corrections and 550-111 Group Facilitation (or taken concurrently) and 809-188 Developmental Psychology and 550-110 Theories & Methods of AODA Trt and 550-154 Culturally Skilled Counseling and (806-177 Gen Anatomy & Physiology (or taken concurrently) or 806-189 Basic Anatomy (or taken concurrently)).

Notes

Alcohol & Other Drug Abuse Associate

Auto Collision Repair & Refinish Technician

Technical Diploma
One Year

Offered in Eau Claire • August and January entry dates

31-405-1

If you've ever wanted to know how to turn a damaged vehicle into something that looks like new, this could be the program you're looking for. Through classroom instruction and work on customers' vehicles, you'll learn the skills you'll need for this career area:

- Estimating
- Non-structural repair
- Plastic repair
- Weld-on panel replacements
- Vehicle refinishing
- Frame and structural repair
- Paint technology
- Mechanical systems repair

In all course activities, you'll find an emphasis on safety. The latest, most advanced equipment and repair techniques are used. Your classes will incorporate I-CAR curriculum, and you may be I-CAR certified when you successfully complete the program.

Employment opportunities are best for people with formal training in automotive body repair and refinishing. The number of vehicles on the road is increasing, leading to a need for people to repair damaged vehicles. This program could be the training you need to prepare for a rewarding career!

This program is certified by the National Institute for Automotive Services Excellence in the areas of painting and refinishing, nonstructural analysis and damage repair, and structural analysis and damage repair.

Admission Requirements

- COMPASS® pre-entry assessment

Helpful Background

- High school graduate or equivalent
- Math
- Industrial education courses

Career Opportunities

- Auto Collision Technician
- Refinishing Technician
- Frame and Alignment Technician
- Trim and Glass Installer
- Collision Estimator
- Autobody Technician
- Auto Glass Technician
- Detail Technician

2009-10 Employment Facts

Average Hourly Wage \$13.51

Average Monthly Income \$2399.79

Employers

Aerco Autobody; Altoona, WI

Auto Vision Center; Eau Claire, WI

Markquart Facilities; Eau Claire, and Hallie, WI

Superior Auto Body; Eau Claire, WI

TruBilt Auto Body; Eau Claire, WI



First Term		Credits
405-301	Introduction to Auto Collision	1
* 405-355	Auto Body Basics	5
* 405-356	Nonstructural Repair	5
405-382	Paint Technology	2
442-315A	Welding for Auto Collision	2
Total Credits.....		15

Second Term		Credits
* 405-357	Refinishing	5
* 405-358	Structural Repair	5
* 405-375	Estimating & Structural Repair	2
804-360C	Math Tech Trades-Auto & Sm Eng	2
Choose 1 course(s) from the following:		
+ * 801-195	Written Communications	3
+ 801-351	Applied Communications	2
Total Credits.....		16

Third Term		Credits
405-352	Advanced Collision Repair.....	5
405-381	Auto Collision Mechanical.....	1
Total Credits.....		6

+ May be offered as distance learning

* Prerequisite required; see course description

Minimum Program Credits Required - 37

For a complete listing of course descriptions see back of catalog.

405-352 Advanced Collision Repair

Students will learn the techniques associated with mechanical repair or replacement of mechanical components related to collision. Restoration/customizing are not available as a part of this course. Restricted to students admitted to the following program(s): 31-405-1 Auto Collision Rpr & Ref Tech.

405-355 Auto Body Basics

This course will give students the opportunity to acquire skills in basic metal finishing techniques, body panel repair techniques, plastic filler application, and surface preparation. Prerequisite(s): 405-382 Paint Technology (or taken concurrently) and 442-315A Welding for Auto Collision (or taken concurrently). Restricted to students admitted to the following program(s): 31-405-1 Auto Collision Rpr & Ref Tech.

405-356 Nonstructural Repair

Students will develop skills in repair of minor and major dent repair, nonstructural. Prerequisite(s): 405-355 Auto Body Basics (or taken concurrently). Restricted to students admitted to the following program(s): 31-405-1 Auto Collision Rpr & Ref Tech.

405-357 Refinishing

Students will complete paint jobs, spot repair, color blending, sanding techniques and taping. Prerequisite(s): 405-356 Nonstructural Repair.

405-358 Structural Repair

Students will determine types and levels of damage to unibody and frame vehicles. Skill in measuring needed repairs will be developed. Prerequisite(s): 405-357 Refinishing (or taken concurrently).

405-375 Estimating & Structural Repair

Terms, abbreviations, and vehicle identification necessary for estimating collision damage will be learned. Emphasis will be placed on following estimating procedures along with development of damage estimate writing skills. Students will acquire the knowledge necessary to conduct an inspection and perform damage analysis, both structural and non-structural. Prerequisite(s): 405-356 Nonstructural Repair and 405-382 Paint Technology. Restricted to students admitted to the following program(s): 31-405-1 Auto Collision Rpr & Ref Tech.

Notes

Auto Collision Repair & Refinish Technician

Offered in Eau Claire • August entry date

31-404-3

If you enjoy working on vehicles and want an educational program you can complete in just one year, consider the Automotive Maintenance Technician program.

This program can help you gain the entry-level skills you need for a career servicing and repairing vehicles. You'll receive training in the Automotive Service Excellence (ASE) areas identified as automotive industry standards:

- Suspension and Steering
- Brakes
- Electrical/Electronic Systems
- Engine Performance

If you complete this program and decide you would like more training, you could apply what you've learned to enter CVTC's two-year Automotive Technician program.

This is a time of change and challenge in the automotive industry, with demand for vehicles that deliver better mileage, higher safety ratings, and increased performance and style. The industry needs trained technicians. Most employers consider completing a vocational training program as the best preparation for entry-level jobs. CVTC's program is a combination of classroom instruction and hands-on practice to give you the background you need to succeed.

Admission Requirements

- COMPASS® pre-entry assessment

Helpful Background

- Good reading skills
- Effective communication skills
- Basic math and science
- Ability to follow written and verbal instructions

Career Opportunities

- Auto Service Technician
- Automotive Technician
- Automotive Parts Salesperson
- Service Writer
- Service Consultant/Advisor
- Mobile Air Conditioning Technician
- Mechanic

2009-10 Employment Facts

Average Hourly Wage \$11.91

Average Monthly Income \$2109.19

Employers

D&A Auto; Unity, WI

Ken Vance Car City Honda; Eau Claire, WI

Keyes Chevrolet; Menomonie, WI

Northside Auto; Arkansaw, WI



First Term		Credits
404-335	Automotive Fundamentals	1
Total Credits.....		1

Second Term		Credits
* 404-336	Basic Vehicle Maintenance	4
* 404-337	Automotive Electricity 1	2
* 404-338	Automotive Electricity 2	3
* 404-339	Automotive Brake Systems	3
442-313	Welding-Automotive Technician	1
804-360C	Math Tech Trades-Auto & Sm Eng	2
Total Credits.....		15

Third Term		Credits
* 404-350	Auto Steering & Suspension Sys	4
* 404-351	Auto Engine Performance 1	2
* 404-352	Auto Engine Performance 2	3
* 404-355	Auto Engine Performance 3	3
+ 801-351	Applied Communications	2
Total Credits.....		14

+ *May be offered as distance learning*

* *Prerequisite required; see course description*

Minimum Program Credits Required - 30

For a complete listing of course descriptions see back of catalog.

404-335 Basic Automotive Fundamentals

A course of study designed to provide the student with an overview of the automotive program along with shop equipment and safety. Computer-based SP2 online safety training will be utilized. Also included is instruction on hand & power tool operation, fastener identification, vehicle lifting procedures, ASE certification criteria, career exploration, and history of the automobile industry. Restricted to students admitted to the following program(s):
31-404-3 Automotive Maintenance Tech.

404-336 Basic Vehicle Maintenance

A course of study designed to provide the student with the skills necessary to perform vehicle maintenance operations such as oil changes, chassis lubrication, tire rotations and inspections. Students will inspect chassis and brake systems, perform safety inspections, maintenance light reset procedures, and retrieve OBD II DTCs. Prerequisite(s): 404-335 Automotive Fundamentals (or taken concurrently). Co-requisite(s): 404-337 Automotive Electricity 1 and 404-338 Automotive Electricity 2 and 404-339 Automotive Brake Systems.

404-337 Automotive Electricity 1

A course of study designed to provide the student with the skills needed to understand electrical fundamentals, including electrical/electronic terminology, electrical components, circuits, measurements, and Ohm's Law relationships. Classroom instruction and hands-on training are provided on how to use electrical wiring diagrams, component locators, and basic testing using industry standard tools to identify and isolate 'open', 'short' and 'high resistance' faults in automotive electrical system circuits. Automotive electrical circuits are studied with related lab work involving locating/replacing circuit components, wire & terminal repair using industry-approved techniques; battery diagnosis, testing & replacement; and electrical cooling fan diagnosis. Prerequisite(s): 404-335 Automotive Fundamentals (or taken concurrently). Co-requisite(s): 404-336 Basic Vehicle Maintenance and 404-338 Automotive Electricity 2 and 404-339 Automotive Brake Systems.

Notes

Auto Maintenance Technician

Offered in Eau Claire • June entry date

32-404-2

If you enjoy working on vehicles, the Automotive Technician program could provide the training you're looking for. You'll gain a theoretical understanding of and practice in all aspects of vehicle maintenance and repair. Much of your training will take place in CVTC's automotive lab, where you will learn while working on customers' cars. The lab provides experience that is very similar to what you will encounter every day on the job as a professional automotive technician.

Training will be offered in all eight areas of the Automotive Service Excellence (ASE) certification areas identified as automotive industry standards:

- Engine Repair
- Automatic Transmissions/Transaxles
- Manual Drive Train and Axles
- Suspension and Steering
- Brakes
- Electrical/Electronic Systems

- Heating and Air Conditioning
- Engine Performance

To enter the Automotive Technician program, you must first complete the one-year Automotive Maintenance Technician program. The Automotive Technician program provides you with a second year of training to help prepare you for even greater employment opportunities.

Skilled automotive technicians are always in demand. You can gain a competitive edge with training in specialized systems, such as electronics or working with hybrid vehicles. The Automotive Technician program could be the program you've been looking for!

Admission Requirements

- COMPASS® pre-entry assessment

Helpful Background

- Good reading skills
- Effective communication skills
- Basic math and science
- Ability to follow written and verbal instructions

Career Opportunities

- Auto Service Technician
- Shop Foreman
- Service Consultant
- Mobile Air Conditioning Technician

2009-10 Employment Facts

This is a new program.

Follow-up information is not yet available.

Employers

This is a new program.

Follow-up information is not yet available.



First Term		Credits
404-335	Automotive Fundamentals	1
Total Credits.....		1

Second Term		Credits
* 404-336	Basic Vehicle Maintenance	4
* 404-337	Automotive Electricity 1	2
* 404-338	Automotive Electricity 2	3
* 404-339	Automotive Brake Systems	3
442-313	Welding-Automotive Technician	1
804-360C	Math Tech Trades-Auto & Sm Eng	2
Total Credits.....		15

Third Term		Credits
* 404-350	Auto Steering & Suspension Sys	4
* 404-351	Auto Engine Performance 1	2
* 404-352	Auto Engine Performance 2	3
* 404-355	Auto Engine Performance 3	3
+ 801-351	Applied Communications	2
Total Credits.....		14

Fourth Term		Credits
* 404-356	Automotive HVAC Systems	4
* 404-357	Auto Safety & Security Systems	2
Total Credits.....		6

Fifth Term		Credits
* 404-360	Auto Axles & Drive Trains	2
* 404-361	Manual Trnsmission & Trnsaxles	3
* 404-362	Auto Trnsmission & Trnsaxles	4
* 404-363	Engine Repair	3
809-351	Occupational Relations	2
Total Credits.....		14

Sixth Term		Credits
* 404-370	Adv Auto Chassis Systems	4
* 404-371	Adv Engine Perf & Alt Fuels	3
* 404-372	Service Simulation	3
* 404-373	High Performance Automotive	1
* 404-374	ASE Test Preparation	1
Total Credits.....		12

+ May be offered as distance learning
 * Prerequisite required; see course description

Minimum Program Credits Required - 62

For a complete listing of course descriptions see back of catalog.

404-356 Automotive HVAC Systems 4 cr
 A course of study designed to provide the student with the skills needed to diagnose, service and repair heating, ventilating, and air conditioning systems in automobiles. The student will be able to evacuate and recharge A/C systems, convert A/C systems from R-12 to R134a refrigerant according to industry standards, and perform component replacement. Students will be able to diagnose and repair computerized climate control systems. Upon successful completion of the course, the student will be licensed to perform A/C repairs in the state of Wisconsin.

Prerequisite(s): 404-350 Auto Steering & Suspension Sys and 404-351 Auto Engine Performance 1 and 404-352 Auto Engine Performance 2 and 404-355 Auto Engine Performance 3. Co-requisite(s): 404-357 Auto Safety & Security Systems.

404-360 Auto Axles & Drive Trains 2 cr
 A course of study designed to provide the student with the skills needed to diagnose, service, and repair automotive axles and drive trains. Coursework includes: wheel bearings, constant velocity joints, drive shafts & u-joints, and differential units.

Prerequisite(s): 404-356 Automotive HVAC Systems and 404-357 Auto Safety & Security Systems. Co-requisite(s): 404-361 Manual Trnsmission & Trnsaxles and 404-362 Auto Trnsmission & Trnsaxles and 404-363 Engine Repair.

404-370 Adv Auto Chassis Systems 4 cr
 A course of study designed to provide the student with the skills needed to diagnose, service, and repair advanced suspension components found on late-model vehicles. Coursework includes: wheel alignment, anti-lock brakes, tire pressure monitoring, electric steering, active suspension, and vehicle stability control, and traction control systems.

Prerequisite(s): 404-360 Auto Axles & Drive Trains and 404-361 Manual Trnsmission & Trnsaxles and 404-362 Auto Trnsmission & Trnsaxles and 404-363 Engine Repair. Co-requisite(s): 404-371 Adv Engine Perf & Alt Fuels and 404-372 Service Simulation and 404-373 High Performance Automotive and 404-374 ASE Test Preparation.

Notes

Automotive Technician

Offered in Eau Claire • August entry date

31-502-1

If you have a strong interest in personal appearance, have artistic flair, enjoy working with people, and are seeking a career with many excellent employment opportunities, consider the Barber-Cosmetologist program.

CVTC has recently created a state-of-the-art barber-cosmetology lab. You'll gain hands-on experience in a setting as close as possible to the work environment you'll find in this career area.

You will gain a complete understanding of salon operations, from marketing and retailing to hygiene and communication skills. The program includes classroom and hands-on instruction to develop the skills you need:

- Basic and specialty haircutting
- Ethnic hair care
- Manicure, pedicure, and nail enhancements
- Facials, makeup artistry, and color analysis

- Hair designing and styling
- Salon sciences
- Salon operations and management
- Retail sales/marketing
- Wisconsin barber-cosmetology laws
- Bacteriology and sanitation
- Perming and coloring
- Hair, skin, and scalp conditioning
- Professionalism and ethics

The possibilities for employment related to this career are excellent, with good earning potential. More than 40 percent of all the people in this profession are self-employed, and many more work flexible schedules. With a career in the barber-cosmetologist field, you have options!

Admission Requirements

- COMPASS® pre-entry assessment

Helpful Background

- Design and fashion
- Ability to work well in a team environment
- Enjoy working with a variety of people
- Flexible work habits
- Familiarity with product sales
- Communication skills
- Artistic ability

Class attendance is critical. The program includes six eight-week sessions, for a total of 1,800 hours, meeting the Wisconsin requirement for licensure.

Graduates must be 18 years old or older to take the state exam.

This career area requires you to have the stamina to stand for long periods of time to perform services on customers/clients.

If you miss one or more eight-week sessions of the program, you are not guaranteed a place in the program. For the best chance of success in this program, you should complete the entire 48 weeks of instruction without interruption.

Career Opportunities

- Stylist (Barber-Cosmetologist)
- Salon Owner
- Makeup Artist
- Manufacturer's Representative
- Nail Technician
- Aesthetician (Skincare Specialist)
- Trainer/Educator

2009-10 Employment Facts

Average Hourly Wage \$10.11

Average Monthly Income \$1405.20

(Note: does not include tips)

Employers

Creative Designs; Whitehall, WI
Mia and Maxx; Eau Claire, WI
Pro-Cuts; Eau Claire, WI
Sports Clips; Chippewa Falls, WI
Sports Clips; Eau Claire, WI
Sports Clips; Lake Hallie, WI
SuperCuts; Onalaska, WI
Trade Secret; Eau Claire, WI



First Term		Credits
502-301	Haircutting 1	2
* 502-304	Haircutting 2	3
502-310	Chemical Services 1	3
502-320	Nail Technology	2
* 502-321	Salon Services 1	4
+ 801-351	Applied Communications	2
806-321	Salon Science	2
Total Credits		18
Second Term		Credits
104-301	Salon Marketing	2
502-311	Hair Styling	2
* 502-314	Chemical Services 2	3
* 502-322	Salon Services 2	4
* 502-323	Salon Services 3	4
502-330	Facial Services	2
Total Credits		17
Third Term		Credits
102-302	Salon Business Operations	2
* 502-305	Haircutting 3	3
* 502-324	Salon Services 4	4
Total Credits		9
Fourth Term		Credits
* 502-325	Salon Services 5	4
* 502-371	Advanced Salon Operations	3
809-351	Occupational Relations	2
Total Credits		9

+ *May be offered as distance learning*

* *Prerequisite required; see course description*

Minimum Program Credits Required - 53

For a complete listing of course descriptions see back of catalog.

102-302 Salon Business Operations

This course provides a comprehensive study of salon management for the cosmetology student in areas of business management. Topics of this course include: an overview of salon management/ownership responsibilities, decision making in business, business planning, and financial management. Co-requisite(s): 502-305 Haircutting 3 and 502-324 Salon Services 4. Restricted to students admitted to the following program(s): 31-502-1 Barber-Cosmetologist.

104-301 Salon Marketing

Students learn the marketing skills involved in operating a salon/spa as a business. Students evaluate merchandising displays, improve retail profits, and investigate various advertising and marketing media. Students learn retail product knowledge, promotion, selling techniques, positive customer relationships, and prescribe professional retail products to the customer. Co-requisite(s): 502-314 Chemical Services 2 and 502-322 Salon Services 2. Restricted to students admitted to the following program(s): 31-502-1 Barber-Cosmetologist.

502-301 Haircutting 1

Topics of this course include: basic techniques and principles used in male and female haircutting techniques, client consultation procedures, safety and sanitation procedures, and professionalism. This course will also introduce basic product knowledge and retail skills. Co-requisite(s): 502-310 Chemical Services 1. Restricted to students admitted to the following program(s): 31-502-1 Barber-Cosmetologist.

502-310 Chemical Services 1

Topics of this course include: chemical services that include basic perm waving and basic coloring techniques. Fundamentals of this would include: safety and sanitation procedures, client consultation procedures, shampooing procedures, sectioning, wrapping, basic coloring techniques, temporary color services, semi-permanent color services, permanent hair coloring techniques and hair removal techniques related to facial waxing services. Co-requisite(s): 502-301 Haircutting 1. Restricted to students admitted to the following program(s): 31-502-1 Barber-Cosmetologist.

Notes

Business Management

Associate Degree
Two Years

Offered in Eau Claire and River Falls

August and January entry dates in Eau Claire and August entry date in River Falls

10-102-3

If you're interested in business, enjoy leadership roles, like being in charge, and are seeking a broad business background, the Business Management program could be a good match for you.

The program is designed to enhance your ability to make sound business decisions. You'll learn how to effectively plan, organize, direct, and evaluate business functions essential to efficient and productive business organizations.

Look around you: business leaders are found in nearly all work settings in virtually every sector of the economy. Business management salaries vary by company and position. Most graduates begin in entry-level positions and advance through the ranks of the organization. Some graduates have developed their own successful businesses.

To maximize your educational time and effort, CVTC has an agreement with Lakeland College that allows you to attend both institutions and

work toward your Associate Degree and Bachelor's Degree in Business Management at the same time. You'll find more information at www.cvtc.edu.

So what are you waiting for?

The Business Management program can help you develop a broad range of skills that you can use to launch your professional career. This could be the program for you!

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment

Helpful Background

- High school business classes
- Computer literacy
- Economics
- Mathematics
- Speech
- Presentation skills
- Writing skills

Career Opportunities

- Assistant Manager
- Training Manager
- Operations Manager

- Customer Relations Specialist
- Administrative Director
- General Manager
- Managing Director
- Front Line Supervisor
- Team Leader

2009-10 Employment Facts

Average Hourly Wage \$13.21

Average Monthly Income \$2486.52

Employers

CEVA Logistics; Jacksonville, FL
Chippewa Valley Habitat for Humanity; Eau Claire, WI
Community Counseling Services; Chippewa Falls, WI
Dunn County Clerk of Court; Menomonie, WI
Fastenal; Chippewa Falls, WI
Fryszki's Country Gardens; Eau Claire, WI
Gander Mountain; Eau Claire, WI
Highland Inn; River Falls, WI
I Care Day Care, LLC.; Eau Claire, WI
Metropolis Hotel; Eau Claire, WI
Midwestern Wheels, Inc; Madison, WI
Nelson True Value; Cumberland, WI
Sitepro.com; Eau Claire, WI
United Health Group; Eau Claire, WI



First Term		Credits
+	102-111 Human Resources, Intro to.....	3
+	102-131 Introduction to Business.....	3
+	103-102 Microsoft Office Suite.....	2
+	104-102 Marketing Principles.....	3
+	* 801-195 Written Communications.....	3
+	* 809-198 Intro to Psychology.....	3
Total Credits.....		17

Second Term		Credits
+	102-112 Principles of Management.....	3
+	102-113 Business Ethics.....	3
+	104-104 Professional Selling.....	3
+	801-196 Oral/Interpersonal Comm.....	3
Choose 3 credits from the following:		
+	101-105 Accounting, Intro to.....	3
+	101-111 Accounting I.....	4
Total Credits.....		15

Third Term		Credits
+	* 101-184 Business Finance & Budgeting.....	3
	* 102-109 Software Skills for Bus Mgr.....	2
+	* 102-116 Management Decision Making.....	3
+	196-188 Project Management.....	3
+	801-198 Speech.....	3
+	* 809-195 Economics.....	3
Total Credits.....		17

Fourth Term		Credits
	* 102-114 Managing Operations.....	3
	* 102-115 Business Mgmt Internship.....	1
	* 102-117 Planning Your Bus Mgmt Career.....	2
+	102-150 International Business.....	3
+	196-190 Leadership Development.....	3
+	* 809-196 Intro to Sociology.....	3
Choose 1 course(s) from the following:		
	* 804-123 Math w Business Apps.....	3
	* 804-189 Introductory Statistics.....	3
Total Credits.....		18

+ May be offered as distance learning

* Prerequisite required; see course description

Minimum Program Credits Required - 67

Note: Students enrolled in the business management, human resources, or marketing management programs will register for the same courses in the first semester of their programs. By the end of the second semester, students must declare which of the three degree programs they intend to complete. Students will have the option to complete more than one program, graduating with more than one degree.

For a complete listing of course descriptions see back of catalog.

101-184 Business Finance & Budgeting

This is a basic Accounting course and not intended for Accounting program majors. The learner applies the skills necessary to achieve an understanding of the fiscal/monetary aspects of business. Each learner will demonstrate application of business types, cycles, forecasting, budgeting, expense control, and financial statement interpretation relevant to the supervisor as a non-accountant. Prerequisite(s): 101-111 Accounting I.

102-111 Human Resources, Intro to

Topics include the nature of employee management, including recruiting, hiring, training, and developing human resources, equal employment opportunity laws, compensation, and performance appraisal.

102-112 Principles of Management

Students learn about the four managerial functions of planning, organizing, leading and controlling in contemporary organizations. A series of self-assessment questionnaires provide insights into personal behaviors and help students turn managerial theories into potential personal managerial practices. Students learn how management processes apply to a global environment.

102-116 Management Decision Making

Students learn and use survey construction, Internet searching, word processing, charting, problem solving, and decision-making skills to compile and analyze data and present recommendations for typical business situations. Prerequisite(s): 103-102 Microsoft Office Suite.

Notes

Offered in Eau Claire • January entry date

30-534-1

The Central Service Technician program could be for you if you are

- Interested in a career in the healthcare field.
- Seeking a short-term educational program.
- Able to work as part of a team.
- Well-organized, with an eye for detail.
- Able to work accurately.
- Have a high degree of manual dexterity.

As a Central Service Technician, you would

- Maintain an uninterrupted supply of instrumentation and supplies used in patient care.
- Support patient care services and be especially involved in the prevention of infection.
- Clean, sterilize and process patient products, including surgical instruments, power equipment, robotic instruments, fiber optic scopes, cameras, and other specialty instrumentation.
- Maintain records associated with supply orders, charges, and inventory.

Your program will include central service technician skill courses, clinical assignments, and general education courses. Graduates receive a technical diploma and are eligible to write the certification exam offered by the International Association of Central Service Materials Management organization. After successfully completing your exam, you will be awarded the title of Certified Registered Central Service Technician. With an additional 200 hours working with instrumentation, you will be eligible to write the Instrument Specialist exam. Upon successful completion of this exam you will earn the title of Certified Instrument Specialist through IAHCSSM.

Central Service is an emerging occupation and will expand as health care becomes more specialized. This could be the program you need for a rewarding career!

Admission Requirements

- COMPASS pre-entry assessment
- Wisconsin criminal background check (requires a processing fee)
- A pre-entrance health history and physical examination must be on file three weeks before you enter the core courses of the Central Service Technician program. The Admissions Office will notify you at the appropriate time.

Helpful Background

- English (grammar, punctuation, spelling)
- Basic math
- Biology

Career Opportunities

- Central Service Technician
- SPD Technician
- Surgical Supply Core Tech
- Anesthesia Aide

- Surgical Attendant
- Storeroom Clerk
- Dental Clinic Sterilization Technician

2009-10 Employment Facts

Average Hourly Wage \$11.41

Average Monthly Income \$1978.16

Employers

Mayo Clinic Health System; Eau Claire, WI
Mayo Clinic Health System; Menomonie, WI
St. Joseph's Hospital; Chippewa Falls, WI
Sacred Heart Hospital; Eau Claire, WI



First Term	Credits
+ • 103-102 Microsoft Office Suite	2
+ • 501-101 Medical Terminology.....	3
• 534-300 Central Serv Tech, Fundamentals	3
* • 534-302 Central Serv Tech Clinical	1
• 806-301 Basic Microbiology.....	2
Choose 1 course(s) from the following:	
+ * 509-302 Human Body in Health & Disease	3
* • 806-177 Gen Anatomy & Physiology.....	4
* • 806-189 Basic Anatomy.....	3
Total Credits.....	14

+ *May be offered as distance learning*

* *Prerequisite required; see course description*

• *A grade of "C" or better is required*

Minimum Program Credits Required - 14

For a complete listing of course descriptions see back of catalog.

534-300 Central Serv Tech, Fundamentals

Introduces packaging, cleaning techniques, care, handling, identification, and usage of instruments, equipment and supplies, basic aseptic techniques and patient centered practices in the lab setting. Students will also spend time working in a Central Service Department at a local hospital. Restricted to students admitted to the following program(s): 30-534-1 Central Serv Technician.

534-302 Central Serv Tech Clinical

Learner is given the opportunity to apply what they have learned in the clinical setting at a local hospital. Time will be spent in the central service department as well as the operating room. Prerequisite(s): 501-101 Medical Terminology (or taken concurrently) and 103-102 Microsoft Office Suite (or taken concurrently) and 534-300 Central Serv Tech, Fundamentals (or taken concurrently) and 806-301 Basic Microbiology (or taken concurrently). Restricted to students admitted to the following program(s): 30-534-1 Central Serv Technician.

Notes

Offered in Eau Claire • August entry date

31-307-1

Do you want to make a difference in the lives of children? If that's your goal, the Child Care Services program may be a good match for you.

As a graduate of this program, you'll care for children while their parents are at work or unavailable for other reasons. You'll attend to the children's health, safety, and nutrition, and have a role in their physical, emotional, intellectual, and social growth.

The Child Care Services program offers a strong framework of child development, nutrition, creative activities, and practical experience with young children in area child care facilities. As a final project, you'll help produce a puppet show enjoyed by hundreds of children.

You may enroll in this program full- or part-time. If you have related work experience, you could qualify for advanced standing. If you decide to continue your education, the credits you earn in this program apply toward the two-year Early Childhood Education associate degree program, and selected credits transfer to some universities.

The ever-expanding field of child care demands higher standards and a larger, better-trained work force to meet the needs of families. Career opportunities vary. You could serve as the lead teacher in a group center, provide family child care in a home setting, oversee child care on cruise ships, or work as a nanny. Many child care providers operate their own successful businesses. You have options!

Admission Requirements

- COMPASS® pre-entry assessment
- Wisconsin criminal background check (requires a processing fee)
- A pre-entrance health history and physical examination must be on file three weeks before you enter the core courses of the Child Care Services program. The Admissions Office will notify you at the appropriate time.

Helpful Background

- Strong written and oral communication and reading comprehension skills
- Child care courses
- Psychology
- Sociology
- Family and consumer education courses

Career Opportunities

- Child Care Teacher/Preschool Teacher
- Assistant Child Care Teacher
- Family Child Care Provider
- Nanny
- Before- and After-School Care Provider
- Recreational Program Leader
- Cruise Ship Child Care
- Infant/Toddler Specialist

2009-10 Employment Facts

Average Hourly Wage \$8.39
Average Monthly Income \$1435.74

Employers

ABC's Daycare and Preschool; Menomonie, WI
Genesis Child Care Center; Eau Claire, WI
Kid Watch; Chicago, IL
REM Wisconsin; Cadott, WI
Regis Child Care Center; Eau Claire, WI
Self-Employed; Eau Claire, WI
Young Impressions, Inc.; Iola, WI



First Term	Credits
307-148 ECE: Foundations of ECE	3
307-151 ECE: Infant & Toddler Dev	3
307-166 ECE: Curriculum Planning	3
307-167 ECE: Hlth Safety & Nutrition	3
* 307-174 ECE: Practicum 1	3
Choose 1 course(s) from the following:	
+ * 801-195 Written Communications	3
+ 801-351 Applied Communications	2
Total Credits	17

Second Term	Credits
307-178 ECE: Art Music & Lang Arts	3
307-179 ECE: Child Development	3
307-188 ECE: Guiding Child Behavior	3
* 307-192 ECE: Practicum 2	3
Choose 2 credits from the following:	
+ * 809-198 Intro to Psychology	3
809-351 Occupational Relations	2
Total Credits	14

+ *May be offered as distance learning*

* *Prerequisite required; see course description*

Minimum Program Credits Required - 31

For a complete listing of course descriptions see back of catalog.

307-148 ECE: Foundations of ECE

This course introduces you to the early childhood profession. Course competencies include: integration of strategies that support diversity and anti-bias perspectives; investigate the history of early childhood education; summarize types of early childhood education settings; identify the components of a quality early childhood education program; summarize responsibilities of early childhood education professionals; explore early childhood curriculum models. Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

307-151 ECE: Infant & Toddler Dev

In this course you will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; analyze development of infants and toddlers (conception to three years); correlate prenatal conditions with development; summarize child development theories; analyze the role of heredity and the environment; examine research-based models; examine culturally and developmentally appropriate environments for infants and toddlers. Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

307-166 ECE: Curriculum Planning

This course examines the components of curriculum planning in early childhood education. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play; establish a developmentally appropriate environment; examine caregiving routines as curriculum; develop activity plans that promote child development and learning; develop unit plans that promote child development and learning; analyze early childhood curriculum models. Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

Notes

Child Care Services

Civil Engineering Technician - Structural

Associate Degree
Two Years

Offered in Eau Claire • August entry date

10-607-5

If you enjoy working with computer applications and have an interest in construction, consider the Civil Engineering Technician-Structural program.

As a graduate, you would be part of the team that completes the complex plans needed before construction of major buildings. Your responsibilities could cover a wide range:

- Design and prepare site plans for residential and commercial buildings
- Design and prepare construction documents (architectural and structural) for wood frame, masonry, concrete, and steel frame buildings
- Design and prepare presentation drawings for proposed buildings and present ideas
- Prepare plans, schedules, and details using AutoCAD, and Revit software systems
- Prepare structural steel shop drawings and erection plans for commercial buildings
- Select and prepare the required design calculations for concrete and steel beams and columns, footings, floor slabs, and open web steel joists

Your training will help you understand technical data and the proper use of construction materials:

- Architectural drafting
- Structural drafting
- Surveying
- Structural analysis
- Construction in concrete/steel
- Estimating

Traditionally, graduates find employment in engineering offices. The program emphasizes the development of computer-aided drafting skills, providing you with the skills you need to succeed in today's highly competitive job market. This could be the career area you're looking for!

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment
 - 80 on Reading
 - 45 on Pre-Algebra
 - 36 on Algebra
- Two years of college prep math or equivalent with passing grade of "C" or better or assessment

Helpful Background

- Strong mathematics skills, including algebra and geometry
- Drafting and CAD
- Keyboarding
- Construction experience
- Basic computer knowledge

Career Opportunities

- Structural Drafter (Design): Performs design and drafting of structural systems in an architectural or engineering firm.



- Structural Drafter (Detailer): Performs design and drafting of structural beams, columns, etc., for structural fabrication.
- CAD Operator: Performs computer drafting for all disciplines in the construction industry.
- Architectural Drafter: Performs architectural preliminary and working drawings in an architectural firm.
- Civil Technician (Surveying): Performs field and office duties typical for surveying and engineering drawings in a surveyor's firm.

2009-10 Employment Facts

Average Hourly Wage \$15.66

Average Monthly Income \$2830.69

Employers

Adecco/Nestle; Eau Claire, WI
Ahern Fire Protection; Fond du Lac, WI
Ambassador Steel; Menomonie, WI
American Structural Metals; Somerset, WI
Badge Aire; Chippewa Falls, WI
Cedar Corporation; Menomonie, WI
Ericksen-Rood & Associates; St. Paul, MN
Global Finishing Solutions; Osseo, WI
SDS Architecturals; Eau Claire, WI
La Crosse Technical Consultants, Inc.; La Crosse, WI
Merrill Iron and Steel; Schofield, WI
Tiry Engineering; Chippewa Falls, WI
Valley Custom Welding; Elmwood, WI

First Term **Credits**

607-100	Draft. Fund./Wood Frame Const.	3
* 607-125	Mechanical Systems	3
607-140	Structural Analysis	4
607-164	CAD Civil	3
Choose 5 credits from the following:		
* 804-113	College Technical Math 1A	3
* 804-114	College Technical Math 1B	2
* 804-115	College Technical Math 1	5
Total Credits		18

Second Term **Credits**

* 607-111	Architectural Drafting I.....	3
* 607-117	Architectural CAD	3
* 607-123	Construction Steel	3
* 607-124	Construction Concrete.....	2
+ * 801-195	Written Communications	3
* 804-116	College Technical Math 2	4
Total Credits		18

Third Term **Credits**

* 607-113	Architectural Drafting II	3
* 607-148	Structural Drafting I.....	4
* 607-152	Construction Methods	2
* 607-155	Soil Mechanics Surveying.....	4
* 806-154	General Physics I.....	4
Total Credits		17

Fourth Term **Credits**

* 607-149	Structural Drafting II	2
* 607-151	Tech Problems-Civil Structural	3
* 607-160	Advanced Structural CAD	3
+ * 801-197	Technical Reporting	3
+ * 809-195	Economics	3
+ * 809-199	Psychology of Human Relations	3
Total Credits		17

+ *May be offered as distance learning*

* *Prerequisite required; see course description*

Minimum Program Credits Required - 70

For a complete listing of course descriptions see back of catalog.

607-100 Draft. Fund./Wood Frame Const.

This course is designed to introduce basic drafting standards. The first part of the course is devoted to developing acceptable drafting techniques and line standards along with the study of two dimensional and three dimensional concepts. Emphasis is placed on developing visual and sketching techniques. Attention is then directed to the application of these drafting standards to trade related problems. In this section of the course, the student will design and draw a complete set of working drawings for a residence in accordance with industry standards. A study of the various drafting standards will be incorporated as the subject matter dictates. The general emphasis in this course will be to merge theory and trade practice. Meet COMPASS math test cutoff score. Prerequisite: High School Algebra or 854-771 Basic Algebra. Restricted to students admitted to the following program(s): 10-607-5 Civil Engineering Tech-Struc.

607-111 Architectural Drafting I

This course provides instruction in commercial architectural drafting. Emphasis is placed on drafting techniques; lettering; and drafting of details, plans, evaluations, and sections. The student develops a set of architectural plans for a small commercial building. Studies of building code requirements, utility applications, and selection of construction materials are made in development of the plans. Prerequisite(s): 607-100 Draft. Fund./Wood Frame Const. and 607-140 Structural Analysis and 607-125 Mechanical Systems or (607-164 CAD Civil or 606-161 CAD, Basic or 606-161C Basic CAD, Level III). Co-requisite(s): 607-117 Architectural CAD.

607-124 Construction Concrete

This course familiarizes the student with concrete construction. The student calculates size and draws details of concrete footings, foundation walls, floor and roof systems, and stairways. Concrete cylinders are tested and analyzed in the laboratory. Prerequisite(s): 607-100 Draft. Fund./Wood Frame Const. and (606-161 CAD, Basic or 606-161C Basic CAD, Level III or 607-164 CAD Civil).

Notes

**Civil Engineering Technician-
Structural**

Clinical Laboratory Technician

Associate Degree
Two Years

Offered in Eau Claire • August entry date

10-513-1

If you are interested in medicine and health care, enjoy laboratory work, and want to provide a service to others, the Clinical Laboratory Technician program could be for you. The program helps you acquire the entry-level knowledge and skills you need to work in a clinical laboratory:

- Collecting and processing biologic specimens for analysis
- Performing analytical tests on body fluids, cells, and products
- Recognizing pre-analytical and analytical variables in laboratory testing
- Monitoring quality control
- Performing preventative and corrective maintenance on laboratory instruments
- Maintaining professional conduct in communication with patients, health care professionals, and the public

This program includes a 20-week internship which might require you to relocate. Clinical internship sites could include Amery, Ashland, Barron, Chippewa Falls, Eau Claire, Hudson, Menomonie, Rice Lake, and Stanley. Upon graduation, you will be eligible to complete the

national certification examination for Clinical Laboratory Technician (CLT).

As a Clinical Laboratory Technician, you would be qualified to work in all kinds of health care settings. Employment of clinical laboratory workers through 2016 is expected to grow faster than the average for all occupations. Job opportunities are excellent!

This program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (www.naacls.org), 5600 N. River Rd, Suite 720, Rosemont, IL 60018.

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment
 - 80 on Reading
 - 45 on Pre-Algebra
 - 46 Writing
- Wisconsin criminal background check (requires a processing fee)
- Algebra, Biology, Chemistry-two semesters at high-school level or one semester at postsecondary level with grade of "C" or better
- A pre-entrance health history and physical examination must be on file three weeks prior to entering the core courses of the Clinical Laboratory Technician program. The Admissions Office will notify you at the appropriate time.

Helpful Background

- Strong reading and mathematic skills
- Critical thinking skills
- Computer literacy



Career Opportunities

- Medical Laboratory Technician (ASCP) or (BOC)
- Clinical Laboratory Technician (NCA)
- Laboratory Technician
- Research Technician

2009-10 Employment Facts

Average Hourly Wage \$16.26

Average Monthly Income \$2738.46

Employers

Bloomer Medical Center; Bloomer, WI
Franciscan Skemp - LaCrescent Clinic; LaCrescent, MN
Franciscan Skemp Hospital- Arcadia; Arcadia, WI
Hudson Physicians Clinic; Hudson, WI
Lakeview Medical Center; Rice Lake, WI
Luther Midelfort Chippewa Valley; Chippewa Falls, WI
Luther Midelfort Luther Hospital; Eau Claire, WI
Luther Midelfort-Northland; Barron, WI
Luther Midelfort-Eau Claire; Eau Claire, WI
Marshfield Clinic; Ladysmith, WI
Rusk County Memorial Hospital; Ladysmith, WI
Western Wisconsin Urology; Eau Claire, WI

First Term	Credits
• 513-110 Basic Lab Skills	1
• 513-111 Phlebotomy	2
• 513-113 QA/Laboratory Math	1
• 513-115 Basic Immunology Concepts.....	2
+ * • 801-195 Written Communications	3
* • 806-177 Gen Anatomy & Physiology	4
* • 806-186 Intro to Biochemistry.....	3
Total Credits.....	16
Second Term	Credits
* • 513-114 Urinalysis	2
* • 513-120 Basic Hematology	3
* • 513-121 Coagulation.....	1
* • 513-122 Intro to Blood Bank	2
* • 513-123 Advanced Blood Bank.....	2
* • 806-197 Microbiology.....	4
+ * • 809-198 Intro to Psychology	3
Total Credits.....	17
Third Term	Credits
Choose 1 course(s) from the following:	
+ * • 801-196 Oral/Interpersonal Comm	3
+ * • 801-197 Technical Reporting.....	3
+ • 801-198 Speech	3
Choose 1 course(s) from the following:	
+ * • 809-195 Economics.....	3
+ * • 809-196 Intro to Sociology	3
+ * • 809-197 Contemporary American Society.....	3
Total Credits.....	6
Fourth Term	Credits
* • 513-131 Clinical Chemistry 1.....	3
• 513-132 Clinical Chemistry 2.....	2
* • 513-133 Clinical Microbiology.....	4
* • 513-140 Adv Topics in Microbiology	2
• 513-145 CLT Seminar.....	3
Total Credits.....	14
Fifth Term	Credits
* • 513-130 Advanced Hematology	2
513-144 Clinical Experience 3	4
* • 513-151 Clinical Experience 1	3
* • 513-152 Clinical Experience 2	4
Total Credits.....	13

- + May be offered as distance learning
- * Prerequisite required; see course description
- A grade of "C" or better is required

Minimum Program Credits Required - 66

For a complete listing of course descriptions see back of catalog.

513-151 Clinical Experience 1

This course provides the learner with opportunities to practice the principles and procedures of laboratory medicine in a clinical laboratory setting including the operation of state of the art instrumentation and the use of laboratory information systems to report results. The fourteen competencies will be divided between Clinical Experience 1, Clinical Experience 2, and Clinical Experience 3. Order that competencies will be covered may vary based on staffing at clinical sites. Prerequisite(s): 513-131 Intro to Clinical Chem Diagnos and 513-132 Adv Clinical Chem Diagnostics and 513-145 CLT Seminar. Co-requisite(s): 513-130 Advanced Hematology and 513-144 Clinical Experience 3 and 513-152 Clinical Experience 2. Restricted to students admitted to the following program(s): 10-513-1 Clinical Laboratory Technician.

513-133 Clinical Microbiology

This course presents the clinical importance of infectious diseases with emphasis upon the appropriate collection, handling, and identification of clinically relevant bacteria. Disease states, modes of transmission and methods of prevention and control, including antibiotic susceptibility testing, will also be discussed. Prerequisite(s): 806-197 Microbiology. Co-requisite(s): 513-140 Adv Topics in Microbiology. Restricted to students admitted to the following program(s): 10-513-1 Clinical Laboratory Technician.

513-140 Adv Topics in Microbiology

This course provides an overview of acid fast organisms, fungi, parasites, and anaerobic bacteria. The organisms, their pathophysiology, epidemiology, the diseases and conditions that they cause, laboratory methods of handling, culturing, and identification will be discussed. Prerequisite(s): 806-197 Microbiology. Co-requisite(s): 513-133 Clinical Microbiology.

Notes

Clinical Laboratory Technician

Offered in Eau Claire and River Falls • August entry date

10-504-1

The criminal justice field is becoming increasingly complex and important. This career area needs people who have good skills and highly-developed personal strengths:

- View toward community service
- Motivated
- High ethical and moral standards
- Strong written and oral communication skills

The program provides the foundation for your career as a law enforcement officer at the municipal, county, or state level. Your career path could include serving as a correctional officer, working for a private investigation agency, or providing security for retail, commercial, or industrial establishments.

The program includes related general education courses and criminal justice courses. You will receive theoretical and practical information on various types of law, community policing, corrections, and criminal

justice ethics. Other courses will strengthen your ability to interact with the public, work with people from diverse backgrounds, and communicate in a professional manner.

As you complete the coursework, you'll be working toward the 520 hours of training required for certification by the Wisconsin Department of Justice, Training and Standards Bureau. If you opt for the Law Enforcement Certification Track, you can add tactical training classes to your regular coursework in your second year in the program. A second option is to attend a summer Criminal Justice-Law Enforcement Academy at CVTC.

Opportunities for employment are good, and most employment areas offer good chances for advancement. This could be the training you need to begin a rewarding career in law enforcement.

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment
80 on Reading
45 on Pre-Algebra
- Required Information Session (RIS)

Helpful Background

- Strong written and oral communication skills
- Strong reading comprehension skills
- Strong social studies
- Mathematics

Career Opportunities

- Corrections Officer
- Deputy Sheriff
- Police Officer
- Private Investigator
- Security Officer

- State Trooper
- Park and Forestry Personnel
- Telecommunicator
- Jail Officer

2009-10 Employment Facts

Average Hourly Wage \$13.91

Average Monthly Income \$2696.99

Employers

American Security; Madison, WI
Dunn County Sheriff's Department; Menomonie, WI
Eau Claire County Sheriff's Department; Eau Claire, WI
Eau Claire Police Department; Eau Claire, WI
Fairchild Police Department; Fairchild, WI
Fall Creek Police Department; Fall Creek, WI
Frederick Police Department; Frederick, WI
Securitas; Wausau, WI
Shell Lake Police Department; Shell Lake, WI
St. Croix County; Hudson, WI
TTM Technologies; Chippewa Falls, WI
Trempealeau County Sheriff's Office; Whitehall, WI
Village of Cameron Police Department; Cameron, WI



First Term **Credits**

• 504-900	Criminal Justice, Intro to.....	3
• 504-902	Criminal Law.....	3
• 504-907	Community Policing Strategies.....	3
+ * 801-171	Business English.....	3
804-107	College Mathematics.....	3
Total Credits.....		15

Second Term **Credits**

• 504-170	Corrections, Intro to.....	3
* 504-904	Juvenile Law.....	3
• 504-908	Traffic Theory.....	3
+ * 801-195	Written Communications.....	3
+ * 809-172	Race Ethnic & Diversity.....	3
+ * 809-199	Psychology of Human Relations.....	3
Total Credits.....		18

Third Term **Credits**

* • 504-107	Law Enforcement Crisis Management.....	3
* • 504-903	Professional Communications.....	3
* • 504-905	Police Report Writing.....	3
+ * 809-196	Intro to Sociology.....	3
Choose 3 credits from the following:		
+ * 809-122	Intro to Amer Government.....	3
+ * 809-197	Contemporary American Society.....	3
Choose 3 credits from the following:		
• 504-103	LE Strategies for Employment.....	3
* • 504-175	Law Enforcement Cert I.....	4
531-110	Basic Emerg Medical Technician.....	4
Total Credits.....		18

Fourth Term **Credits**

* • 504-121	Patrol Procedures.....	4
* • 504-901	Constitutional Law.....	3
+ * • 504-906	Criminal Investigation Theory.....	3
+ • 801-196	Oral/Interpersonal Comm.....	3
Choose 3 credits from the following:		
• 504-162	Contemp. Issues in Crim. Just.....	3
* • 504-166	Field Experience-Crim Justice.....	3
* • 504-176	Law Enforcement-Cert II.....	4
Total Credits.....		16

- + *May be offered as distance learning*
- * *Prerequisite required; see course description*
- *A grade of "C-" or better is required*

Minimum Program Credits Required - 67

For a complete listing of course descriptions see back of catalog.

504-103 LE Strategies for Employment

This course entails essential steps in preparing and obtaining a position in the field of Law Enforcement. Students will explore the various aspects of each setting from an organizational perspective. Resume, letter of application and portfolio tools will be created. Practical applications for job interviewing will take place along with learning from area employers how to conduct a successful interview. Part of the course will be devoted to the preparation and execution of building physical agility. Restricted to students admitted to the following program(s): 10-504-1 Criminal Justice-Law Enforce.

504-902 Criminal Law

Principles for criminal liability; historical development; elements of crimes; criminal defenses. Restricted to students admitted to the following program(s): 10-504-1 Criminal Justice-Law Enforce.

504-901 Constitutional Law

Arrest with and without warrants; searches with or without warrants; exclusionary rules. Prerequisite(s): (504-902 Criminal Law or 504-113 Criminal Law).

504-121 Patrol Procedures

Patrol officer's role; explanation of handling usual and unusual assignments; strategies of officer survival; patrol tactics; traffic stops. Prerequisite(s): 504-160 Community Policing or 504-907 Community Policing Strategies. Restricted to students admitted to the following program(s): 10-504-1 Criminal Justice-Law Enforce.

504-906 Criminal Investigation Theory

Preliminary investigation, crime scene control; identify and collect evidence; develop information; court presentation of evidence. Prerequisite(s): 504-113 Criminal Law or 504-902 Criminal Law.

Notes

Criminal Justice - Law Enforcement

Offered in Eau Claire • August and January entry dates

30-504-1

The Criminal Justice-Law Enforcement Academy is designed for potential law enforcement officers who need or want to meet Wisconsin certification requirements.

You may be considered for admission to the Academy if you

- Are a full-time or part-time law enforcement officer – or
- Have graduated from CVTC's Criminal Justice-Law Enforcement Associate Degree program – or
- Have earned at least 60 college credits or the equivalent.

The 520-hour training program is competency-based and meets the criteria set by the Wisconsin Department of Justice, Training and Standards Bureau. Training is delivered through lecture, multimedia presentations, interactive group discussion, hands-on instruction, and field exercises. All classes are conducted at CVTC's Criminal Justice Division in Eau Claire, Wisconsin.

Full-time students are expected to participate from 8 a.m. to 5 p.m. Monday through Friday and be available for scheduled evening and weekend instruction designed to simulate actual conditions. Some training will take place outdoors.

This is a challenging program designed to help you take your law enforcement career to the next level.

Admission Requirements

- Proof of employment as a law-enforcement officer – or Graduate of CVTC Criminal Justice-Law Enforcement Associate Degree program – or Proof of at least 60 college credits or the equivalent
- 18 years of age or older
- Proof of U.S. citizenship (certified copy of the student's birth certificate must be presented for examination)
- High school diploma or GED
- Satisfactory interview by the Academy Advisory Committee
- Satisfactory Wisconsin criminal history record request (DJLE250) (submitted by student)
- Satisfactory controlled substance testing (at student's expense within 60 days before Academy start date)
- Valid driver's license
- No felony or domestic related conviction

Upon acceptance to the Academy, you must submit the results of a medical exam (conducted at your expense within the previous six months).



For detailed requirements and information on obtaining an application packet, visit the website at www.cvtc.edu and review the program information (www.cvtc.edu/Applications/catalog/admissinfo/30-504-1.pdf), or call an Enrollment Assistant at 1-800-547-2882.

Career Opportunities

- Correctional Officer
- Deputy Sheriff
- DNR Warden
- Park Ranger
- Police Officer
- State Trooper

2009-10 Employment Facts

Average Hourly Wage \$18.24

Average Monthly Income \$3034.96

Employers

Arcadia Police Department
Black River Falls Police Department
City of Eau Claire Police Department
Eau Claire County Sheriff's Office
Hammond Police Department
Juneau County Sheriff's Department
Madison Police Department
Pierce County Sheriff's Department
Somerset Police Department
St. Croix County Sheriff's Department
Watersmeet Tribal Police
Webster Police Department

First Term	Credits
504-350 Police Academy Scenario Eval.....	1
504-351 Policing in America	1
504-352 The Legal Context	2
504-353 Tactical Skills.....	3
504-354 Relational Skills.....	3
504-355 Patrol Procedures.....	4
504-356 Investigations.....	2
Total Credits.....	16

Minimum Program Credits Required - 16

For a complete listing of course descriptions see back of catalog.

504-350 Police Academy Scenario Eval

A minimum of seven scenarios will be set up for each recruit. Students will be expected to apply all knowledge and skills learned prior to this course. An evaluation will be conducted for each scenario based on desired outcomes. Restricted to students admitted to the following program(s): 30-504-1 Crim Jus-Law Enf Academ.

504-351 Policing in America

Students will learn the rules and procedures of the academy and how the various elements of the criminal justice system relate as well as the importance of professionalism. Exploration of the role of law enforcement officers in a democracy along with topics to include belief system pressures, moral problems, decision-making and consequences of decision will be studied. Resources available in communities to assist law enforcement officers along with issues involved policing in a diverse society will be addressed. This course covers Wisconsin required written law enforcement agency policies and procedures. Restricted to students admitted to the following program(s): 30-504-1 Crim Jus-Law Enforcement Academy.

504-352 The Legal Context

This covers the structure of the criminal justice system, including criminal procedure. Learn the legal bases for law enforcement action such as arrest, use of force and search and seizure, as well as the limits on law enforcement activity. Students will learn the classifications of crimes and other violations including felonies, misdemeanors, and ordinance violations, and the elements of crimes listed in the criminal code. Laws and procedures that affect juveniles, including those related to taking a juvenile into custody, will be discussed. Restricted to students admitted to the following program(s): 30-504-1 Crim Jus-Law Enforcement Academy.

Notes

Criminal Justice - Law Enforcement Academy

Offered in Eau Claire • August and January entry dates

30-508-2

Self-directed, motivated, able to anticipate the needs of others, detail oriented, good dexterity, able to work as part of a team, interested in helping people: if that sounds like you, the Dental Assistant program could be what you're looking for.

Employment is expected to grow 29 percent through 2016, which is much faster than the average for all occupations. You have opportunities!

This program is a combination of theory and hands-on experiences. You'll gain the knowledge and skills you'll need to

- Assist the dentist in dental procedures.
- Sterilize and prepare instruments.
- Take impressions; prepare models and lab work.
- Assist with general office procedures.
- Expose and develop x-rays.
- Maintain and update dental charts.

After two years' on-the-job experience, you will be eligible to apply for the certification examination of the Dental Assistant National Board.

Admission Requirements

- COMPASS® pre-entry assessment
80 on Reading
45 on Pre-Algebra
- Wisconsin criminal background check (requires a processing fee)
- Proof that you've completed a CPR course, a pre-entrance health history, and physical examination must be on file three weeks before you enter the core courses of the Dental Assistant program. The Admissions Office will notify you at the appropriate time.

Helpful Background

Hepatitis B vaccination is highly recommended before enrolling in any program lab course.

This program is not eligible for financial aid consideration. However, students may be eligible for an alternative student loan.

Career Opportunities

- Dental Assistant
- Dental Office Receptionist
- Dental Insurance Clerk

2009-10 Employment Facts

Average Hourly Wage \$13.04
Average Monthly Income \$2156.73

Employers

Blue Diamond Family Dental; Bloomer, WI
C and B Dental Studio; Eau Claire, WI
CVTC Dental Clinic; Eau Claire, WI
Christman Dental LTD; Chippewa Falls, WI
Community Dental; Black River Falls, WI
Dr. K. Dillard, Family Dental Care of La Crosse; La Crosse, WI
Hillside Dental; Eau Claire, WI
Joe Theisen Dental; Eau Claire, WI
Marshfield Clinic; various Wisconsin locations
Oak Park Dental; Eau Claire, WI
Oral Maxillofacial Surgery & Associates; Eau Claire, WI
Oral Surgery Associates; Mequon, WI



First Term	Credits
• 508-101 Dental Health Safety.....	1
* • 508-302 Dental Chairside	5
* • 508-304 Dental & General Anatomy.....	2
* • 508-305 Applied Dental Radiography.....	2
* • 508-306 Dental Assistant Clinical.....	3
+ * • 508-307 Dental Assistant Professional.....	1
Choose 1 course(s) from the following:	
* 508-113 Dental Materials	2
* 508-303 Dental Materials	2
Total Credits.....	16

- + *May be offered as distance learning*
- * *Prerequisite required; see course description*
- *A grade of "C" or better is required*

Minimum Program Credits Required - 16

For a complete listing of course descriptions see back of catalog.

508-101 Dental Health Safety

Prepares dental auxiliary students to respond proactively to dental emergencies, control infection, prevent disease, adhere to OSHA Standards, and safely manage hazardous materials. Students also take patient vital signs and collect patient medical/dental histories. CPR certification is a prerequisite; students will be required to show proof of certification before beginning the course. Restricted to students admitted to the following program(s): 10-508-1 Dental Hygienist, 30-508-2 Dental Assistant.

508-302 Dental Chairside

Prepares dental assistant students to chart oral cavity structures, dental pathology, and restorations and to assist a dentist with basic dental procedures including examinations, pain control, amalgam restoration, and cosmetic restoration. Students will also develop the ability to educate patients about preventive dentistry, brushing and flossing techniques, and dental procedures, using lay terminology. Throughout the course, students will apply decoding strategies to the correct use and interpretation of dental terminology. Prerequisite(s): 508-101 Dental Health Safety (or taken concurrently). Co-requisite(s): 508-303 Dental Materials and 508-304 Dental & General Anatomy and 508-305 Applied Dental Radiography and 508-306 Dental Assistant Clinical and 508-307 Dental Assistant Professional. Restricted to students admitted to the following program(s): 30-508-2 Dental Assistant.

508-303 Dental Materials

Prepares dental auxiliary students to handle and prepare dental materials such as liners, bases, cements, amalgam, resin restorative materials, gypsum products, and impression materials. They also learn to take alginate impressions on manikins and clean removable appliances. Prerequisite(s): 508-101 Dental Health Safety (or taken concurrently). Co-requisite(s): 508-302 Dental Chairside and 508-304 Dental & General Anatomy and 508-305 Applied Dental Radiography and 508-306 Dental Assistant Clinical and 508-307 Dental Assistant Professional. Restricted to students admitted to the following program(s): 30-508-2 Dental Assistant.

Notes

Dental Assistant

Offered in Eau Claire • August entry date

10-508-1

The Dental Hygienist program is a good option if you are seeking a career in the health field, have good organizational skills, enjoy working with people, and are detail-oriented.

During your educational program, you will work as a member of a dental health team, focusing on the assessment, diagnosis, treatment planning, implementation, evaluation, and documentation of dental disease as well as prevention of dental disease:

- Perform oral inspections
- Remove deposits and stains from teeth
- Expose and process dental x-rays
- Counsel patients in preventative dental care

The program prepares you to take the national, regional, and state practical exams that are required for you to be licensed. Graduates of the program are held to high standards. They must

- Meet the dental health needs of diverse populations.

- Customize and proceed with emergency care protocol based on recognizing symptoms of medical/dental emergencies.
- Use the most current infection control guidelines and safety precautions in all laboratory and clinical settings.
- Apply principles of dental practice management as a member of a dental health team.
- Demonstrate ethical and professional behavior in all roles as a dental hygienist.

Graduates are working in public and private dental practices, hospitals, community dental health facilities, and in research. Job prospects are expected to remain excellent. You have opportunities!

This program is accredited by the Commission on Dental Accreditation of the American Dental Association.

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment, 85 on Reading, 30 on Algebra
- Wisconsin criminal background check (requires a processing fee)
- Two semesters of high school work or one semester of postsecondary work in algebra, biology, and chemistry with grades of “C” or better. (This course work should be current. If it has been more than five years since you completed the courses, you may benefit from opportunities to refresh your learning. A counselor can help you make plans.)
- Proof you have completed a CPR course, a pre-entrance health history, physical examination, and a dental examination must be on file three weeks before you enter the core courses of the Dental Hygienist program. The Admissions Office will notify you at the appropriate time.
- Student hygienists must purchase professional liability insurance and furnish uniforms, instruments, and textbooks.

Helpful Background

- Strong science aptitude
- Oral and written communication skills



- Strong reading and problem-solving skills
- Computer knowledge
- Outgoing personality

This program is intense. To ensure your own success, complete as many of the general education courses as possible before beginning the core courses.

Career Opportunities

- Dental Hygienist
- Dental Sales & Marketing
- Dental Assistant/Hygiene Assistant
- Dental Receptionist
- Public Health

2009-10 Employment Facts

Average Hourly Wage \$24.83

Average Monthly Income \$2283.57

Employers

Badger Family Dental; Chippewa Falls, WI
Blue Diamond Family Dental; Bloomer, WI
CVTC Dental Clinic; Eau Claire, WI
Dr. Sacia; Mondovi, WI
Dr. Edward Dunbar and Dr. Peter Rydell; Shell Lake and Hayward, WI
Dr. James Haley; Chippewa Falls, WI
Filson Gentle Dentistry; Bayport, MN
Ladysmith High School; Ladysmith, WI
Midwest Dental; Eau Claire, WI
Oral Surgery; Eau Claire, WI
Eau Claire Family Dental; Eau Claire, WI
Summit Dental; Eau Claire, WI

First Term		Credits
* • 806-177	Gen Anatomy & Physiology	4
Total Credits		4

Second Term		Credits
• 508-101	Dental Health Safety	1
Total Credits		1

Third Term		Credits
* • 508-102	Oral Anatomy, Embry, Histology	4
* • 508-103	Dental Radiography	2
* • 508-105	Dental Hygiene Process 1	4
* • 806-186	Intro to Biochemistry	3
* • 806-197	Microbiology	4
Total Credits		17

Fourth Term		Credits
* • 508-106	Dental Hygiene Process 2	4
* • 508-108	Periodontology	3
* • 508-109	Cariology	1
+ * • 508-110	Nutrition and Dental Health	2
* • 508-111	General & Oral Pathology	3
+ * • 801-195	Written Communications	3
Total Credits		16

Fifth Term		Credits
* • 508-112	Dental Hygiene Process 3	5
* • 508-113	Dental Materials	2
+ * • 508-114	Dental Pharmacology	2
* • 508-115	Community Dental Health	2
+ 508-119	Dental Hyg Natl Board Review	1
+ * • 809-198	Intro to Psychology	3
Total Credits		15

Sixth Term		Credits
* • 508-107	Dental Hygiene Ethics & Profes	1
* • 508-116	Dental Pain Management	1
* • 508-117	Dental Hygiene Process 4	4
* 508-118	Health Occupations Career	1
+ * • 809-188	Developmental Psychology	3
Choose 3 credits from the following:		
+ • 801-196	Oral/Interpersonal Comm	3
+ • 801-198	Speech	3
Choose 3 credits from the following:		
+ * • 809-172	Race Ethnic & Diversity	3
+ * • 809-196	Intro to Sociology	3
Total Credits		16

+ May be offered as distance learning
 * Prerequisite required; see course description
 • A grade of "C" or better is required

Minimum Program Credits Required - 69

For a complete listing of course descriptions see back of catalog.

508-101 Dental Health Safety

Prepares dental auxiliary students to respond proactively to dental emergencies, control infection, prevent disease, adhere to OSHA Standards, and safely manage hazardous materials. Students also take patient vital signs and collect patient medical/dental histories. CPR certification is a prerequisite; students will be required to show proof of certification before beginning the course. Restricted to students admitted to the following program(s): 10-508-1 Dental Hygienist, 30-508-2 Dental Assistant.

508-102 Oral Anatomy, Embry, Histology

Prepares Dental Hygienist students to apply detailed knowledge about oral anatomy to planning, implementation, assessment, and evaluation of patient care. Students identify distinguishing characteristics of normal and abnormal dental, head, and neck anatomy and its relationship to tooth development, eruption, and health. Prerequisite(s): 806-177 Gen Anatomy & Physiology. Restricted to students admitted to the following program(s): 10-508-1 Dental Hygienist.

508-103 Dental Radiography

Prepares dental auxiliary students to operate x-ray units and expose bitewing, periapical, extral oral, and occlusal radiographs. Emphasis is placed on protection against x-ray hazards. Students also process, mount, and evaluate radiographs for diagnostic value. In this course, students demonstrate competency on a manikin. In addition, students expose bitewing radiographs on a peer, role-play patient. Prerequisite(s): 508-101 Dental Health Safety (or taken concurrently) and 508-102 Oral Anatomy, Embry, Histology (or taken concurrently). Restricted to students admitted to the following program(s): 10-508-1 Dental Hygienist.

508-109 Cariology

This course focuses on the characteristics and contributing factors of dental decay. Dental Hygiene students help patients minimize caries risk by developing treatment plans, communicating methods to patients, and evaluating treatment results. Prerequisite(s): 806-186 Intro to Biochemistry and 806-197 Microbiology and 508-106 Dental Hygiene Process 2 (or taken concurrently).

Notes

Dental Hygienist

Diagnostic Medical Sonography

Associate Degree
Two Years

Offered in Eau Claire • August entry date

10-526-2

The Diagnostic Medical Sonography (DMS) program can prepare you for entry-level employment in a general ultrasound department. Duties of a sonographer include performing abdominal, obstetrical, and gynecologic imaging; superficial structure imaging; and limited vascular ultrasound imaging.

Sonographers operate high-technology equipment while working with patients who may be sick, disabled, and/or dependent. You must apply knowledge of anatomy, physiology, and pathophysiology to the human body for success in this program and in your profession. You will be required to complete a seven-month internship during the second year and must be prepared to relocate for that portion of your program.

Graduates of a Associate Degree or higher Nursing Program may be considered on a case-by-case basis for Advanced Placement acceptance. Students must be Nursing Board eligible.

Upon graduation, you will be prepared for and therefore eligible to

complete the national registry examination in ultrasound physics, obstetrics/gynecology, and abdominal ultrasound (ARDMS Boards).

The program is accredited through the Committee on Allied Health Education and Accreditation/JRC-DMS, 6021 University Boulevard, Suite 500, Ellicott City, MD 21043; www.jrcdms.org; e-mail jrcdms@intersocietal.org.

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment, 80 on Reading, 45 on Pre-Algebra; (no assessment for advanced placement students)
- Wisconsin criminal background check (requires a processing fee)
- Algebra, Chemistry, Physics-two semesters at high school level or one semester at postsecondary level with grade of "C" or better
- Completion of Basic Nursing Assistant class or proof of Certified Nursing Assistant
- A pre-entrance health history and physical examination must be on file three weeks prior to entering the DMS core courses. The Admissions Office will notify you at the appropriate time.
- Sufficient visual, communication, and motor skills and satisfactory intellectual and emotional functions to perform to the high standards maintained in this career. A detailed list is available with the Diagnostic Medical Sonography program information at www.cvtc.edu or through a program counselor.

Helpful Background

- Advanced algebra, geometry



- Advanced science, chemistry
- Computer technology
- Strong reading and communication skills
- Critical thinking skills

Advanced placement students:

- Transcripts of coursework completed leading to at least an associate degree in a related health field
- Verification of registration/certification in an allied health field
- Sufficient visual, communication, and motor skills and satisfactory intellectual and emotional functions to perform to the high standards maintained in this career. A detailed list is available with the Diagnostic Medical Sonography program information at www.cvtc.edu or through a program counselor.

Career Opportunities

- Diagnostic Medical Sonographer
- Sonographer
- Ultrasonographer
- Ultrasound Technologist

2009-10 Employment Facts

Average Hourly Wage \$27.60

Average Monthly Income \$4505.07

Employers

Abbott Northwestern; Minneapolis, MN
Aspirus Wausau Hospital; Wausau, WI
Aurora Hartford Hospital; Hartford, WI
Baptist Health; Jacksonville, FL
Bay Area Medical Center; Marinette, WI
Community Health Network; Berlin, WI
Franciscan Skemp; La Crosse, WI
Marshfield Clinic; Marshfield, WI
Mayo Clinic; Rochester, MN
Riverside Regional Medical Center; New Port News, VA
St. Luke's Hospital; Duluth, MN

First Term	Credits
+ • 501-101 Medical Terminology.....	3
• 526-200 Introduction to DMS.....	3
* • 804-113 College Technical Math 1A	3
* • 806-154 General Physics 1	4
* • 806-177 Gen Anatomy & Physiology.....	4
Total Credits.....	17
Second Term	Credits
* • 526-207 Abdominal Sonography	4
* • 526-208 OB/GYN Sonography 1	3
* • 526-210 Cross Sectional Anatomy	2
* • 526-221 Sonography Physics 1	3
* • 526-223 Vascular Imaging 1	3
* • 806-179 Adv Anatomy & Physiology.....	4
Total Credits.....	19
Third Term	Credits
+ * • 801-195 Written Communications	3
+ * • 809-196 Intro to Sociology	3
Total Credits.....	6
Fourth Term	Credits
• 526-203 Scanning With Proficiency	1
* • 526-211 Superficial Sonography	2
* • 526-212 OB/GYN Sonography 2	3
* • 526-222 Sonography Physics 2	2
* • 526-224 Vascular Imaging 2	3
+ • 801-196 Oral/Interpersonal Comm	3
+* • 809-198 Intro to Psychology	3
Total Credits.....	17
Fifth Term	Credits
* • 526-209 DMS Clinical Experience 1.....	2
• 526-226 DMS Clinical Experience 2.....	3
Total Credits.....	5
Sixth Term	Credits
* • 526-215 DMS Clinical Experience 3.....	4
• 526-217 Registry Review.....	1
Total Credits.....	5

- + May be offered as distance learning
- * Prerequisite required; see course description
- A grade of "C" or better is required

Minimum Program Credits Required - 69

For a complete listing of course descriptions see back of catalog.

501-101 Medical Terminology

This course focuses on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms. Emphasis on spelling, definition, and pronunciation. Introduction to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

526-200 Introduction to DMS

This course introduces learners to the field of Diagnostic Medical Sonography. Explores the duties and functions of the Diagnostic Medical Sonographer as well as the historical background. Learners examine the other imaging modalities as they relate to Sonography. Includes principles of patient care and legal and ethical issues related to Sonography. Restricted to students admitted to the following program(s): 10-526-2 Diagnostic Medical Sonography.

526-203 Scanning With Proficiency

Prepares learners for the rigors of clinical imaging by performing timed abdominal and gynecological competencies. Co-requisite(s): 526-212 OB/GYN Sonography 2. Restricted to students admitted to the following program(s): 10-526-2 Diagnostic Medical Sonography.

526-212 OB/GYN Sonography 2

Prepares learners to perform ultrasounds of the second and third trimester pregnancy. Explores the anatomy, physiology, and pathology of the female pelvis and the developing fetus. Learners will be exposed to interventional procedures related to pregnancy. Prerequisite(s): 526-208 OB/GYN Sonography 1. Co-requisite(s): 526-203 Scanning With Proficiency and 526-222 Sonography Physics 2.

Notes

Diesel/Heavy Equipment Technician (Truck Technician)

Technical Diploma
Two Years

Offered in Eau Claire • August entry date

32-412-1

If you have a talent for working with mechanical systems and good problem-solving skills, the Diesel/Heavy Equipment Technician program could be a good match for you.

As a graduate, you would inspect, analyze, and repair heavy trucks and equipment. Many employers require NATEF/ASE and Department of Transportation certification. The Diesel Truck Technician program at CVTC helps you meet those requirements, giving you an edge when it comes time to start your career.

Your instructors are ASE certified Heavy Duty Truck Technicians with many years of trade and teaching experience. Your program will include instruction in several core areas, all required for NATEF/ASE certification:

- Diesel engines
- Suspension and steering
- Brakes

- Electrical/electronic systems
- Preventive maintenance inspection
- Drive train
- Heating
- Air conditioning systems

All students graduate from the program with a Class “A” commercial driver’s license – necessary if you’re going to test drive those big rigs – along with DOT certifications as a 396.25 Brake Inspector, 396.19 Vehicle Inspector, and State AG 136 Mobile Air Conditioning Certification.

The job outlook is very good for people with strong technical skills who complete formal training in diesel mechanics. This program offers the training you need for a competitive edge toward starting your career!

Admission Requirements

- COMPASS® pre-entry assessment
- Controlled substance testing prior to beginning core courses

Helpful Background

- Automotive classes
- Mathematics
- Science

Students are subject to random controlled substance testing while enrolled in the program.

Career Opportunities

- Fleet Truck Service Technician
- Dealer Truck Service Technician
- Bus Technician
- Trailer Technician
- Electrical Technician

- Air Conditioning Technician
- DOT Inspector
- Technical Service Representative
- Sales Representative
- Shop Foreman

2009-10 Employment Facts

Average Hourly Wage \$16.09

Average Monthly Income \$3207.78

Employers

Eau Claire Mack & Volvo Trucks; Eau Claire, WI
Eau Claire Truck & Trailer; Eau Claire, WI
Excel Truck and Trailer; Rapid City, SD
MDMA Equipment; Durand, WI
Marten Transport; Mondovi, WI
Vita Plus Smith Transport; Loyal, WI
Wal-Mart Fleet; Menomonie, WI



First Term		Credits
412-305	Truck Chassis I	5
412-306	Truck Chassis II	5
412-345	Basic DC Electricity	2
442-314B	Related Welding for Diesel.....	2
+ 801-351	Applied Communications	2
Total Credits.....		16
Second Term		Credits
* 412-307	Chassis Electrical.....	5
* 412-308	Mechanical Gear Trains.....	4
* 412-309	Air Conditioning/Refrigeration.....	3
458-320	CDL License Training	1
804-361	Math 10	2
Total Credits.....		15
Third Term		Credits
* 412-310	Diesel Engine Oper & Tune-up	4
* 412-311	Applied Mobile Hydraulics	2
* 412-312	Intro to Electronic Control	4
412-320	Diesel Equipment Service Mgmt.....	2
419-301	Related Fluid Power	1
420-347	Related Machine Tool.....	2
* 806-341	Vocational Science.....	2
Total Credits.....		17
Fourth Term		Credits
* 412-313	Diesel Engine Overhaul.....	5
* 412-314	Electronic Diagnostics.....	4
* 412-315	Preventive Maintenance	1
* 412-380	Diesel Internship.....	2
* 442-320A	Related Welding Diesel, Adv.....	2
809-351	Occupational Relations.....	2
Total Credits.....		16

+ May be offered as distance learning
 * Prerequisite required; see course description

Minimum Program Credits Required - 64

For a complete listing of course descriptions see back of catalog.

412-305 Truck Chassis I

This course will introduce the student to the diesel/heavy duty truck repair business. Vehicle safety, driving practices, truck servicing, and wheel end repair, along with hydraulic brakes, air brakes, and air brake systems will be the subject material. A tool kit is required by each student in this course. Co-requisite(s): 412-306 Truck Chassis II. Restricted to students admitted to the following program(s): 32-412-1 Diesel/Heavy Equip. Technician.

412-306 Truck Chassis II

This course will study front-end geometry, alignment, steering, and suspensions as it pertains to light- and heavy-duty trucks. Also studied will be clutches, drivelines, coupling, and 5th wheel operation. A tool kit is required by each student in this course. Co-requisite(s): 412-305 Truck Chassis I.

412-307 Chassis Electrical

This course will study all aspects of electrical systems found on heavy-duty trucks. Battery testing, lighting, starting, charging, in-dash controls, schematic interpretation, and troubleshooting techniques using a digital multi-meter will be practiced. A tool kit is required by each student in this course. Prerequisite(s): 412-306 Truck Chassis II. Co-requisite(s): 412-308 Mechanical Gear Trains and 412-309 Air Conditioning/Refrigeration.

412-308 Mechanical Gear Trains

This course introduces the student to rear axle, power divider, and manual transmission concepts. The student will study gear ratios, gear types, gear train configurations, failure analysis, standard servicing requirements, and practice the rebuilding techniques for each major brand. A tool kit is required by each student in this course. Prerequisite(s): 412-306 Truck Chassis II. Co-requisite(s): 412-307 Chassis Electrical and 412-309 Air Conditioning/Refrigeration.

Notes

Diesel/Heavy Equipment Technician

Offered in Eau Claire • August entry date

10-307-1

If you're seeking a career that involves helping children learn about themselves and the world around them, the Early Childhood Education program might be for you.

As an early childhood teacher, you would play a vital role in the development of children. You'll work with children individually and in groups to help them improve their social skills and prepare for formal education.

In this program you'll study the physical, emotional, intellectual, and social development of children. You'll be placed with qualified teachers and child care providers in a variety of early childhood community settings, such as group and family child care settings, Head Starts, preschools, and kindergartens. You'll also help create and complete a class advocacy project to improve the status of children and their families in this region.

You may enroll in the program full- or part-time. If you already have experience working in child care or early childhood education, you could be granted advanced standing. If you would like to continue your education, many of the credits you earn will transfer to selected universities toward a four-year degree in early childhood or elementary education.

The need for qualified, experienced childcare providers is strong. This is a career area that offers the rewards of working with children and the satisfaction of knowing you are helping them grow and develop. It could be just what you're looking for!

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment
- Wisconsin criminal background check (requires a processing fee)
- A pre-entrance health history and physical examination must be on file three weeks before you enter the core courses of the Early Childhood Education program. The Admissions Office will notify you at the appropriate time.

Helpful Background

- Art, music
- Child growth and development courses
- Family and consumer related courses
- Speech
- Psychology
- Sociology
- American government



Career Opportunities

- Child Care Center Teacher
- Preschool Teacher
- Family Child Care Provider
- Child Care Program Supervisor
- Elementary Public School Teacher Aide
- Head Start Teacher/Assistant
- Nanny
- Before- and After-School Care

2009-10 Employment Facts

Average Hourly Wage \$8.31
Average Monthly Income \$1488.35

Employers

Brighter Beginnings Early Learning Center; Eau Claire, WI
Cassie's House Daycare; Eau Claire, WI
Color My World -- South; Eau Claire, WI
Ladybug Land Child Care; Chippewa Falls, WI
Learning Depot; Whitewater, WI
Little Bloomers Daycare; Eau Claire, WI
Luther-Midelfort Child Dev. Center; Eau Claire, WI
Self-employed; Stanley, WI
YMCA; Chippewa Falls, WI

First Term		Credits
307-148	ECE: Foundations of ECE	3
307-151	ECE: Infant & Toddler Dev	3
307-166	ECE: Curriculum Planning	3
307-167	ECE: Hlth Safety & Nutrition	3
* 307-174	ECE: Practicum 1.....	3
+ * 801-195	Written Communications	3
Total Credits.....		18

Second Term		Credits
307-178	ECE: Art Music & Lang Arts.....	3
307-179	ECE: Child Development.....	3
307-188	ECE: Guiding Children's Behavior	3
* 307-192	ECE: Practicum 2.....	3
+ * 809-198	Intro to Psychology	3
Total Credits.....		15

Third Term		Credits
307-194	ECE: Math Science & Soc St.....	3
307-195	ECE: Family & Community Rel.....	3
* 307-197	ECE: Practicum 3.....	3
804-107	College Mathematics	3
+ * 809-122	Intro to Amer Government.....	3
* 809-128	Marriage & Family	3
Total Credits.....		18

Fourth Term		Credits
307-187	ECE: Children w Diff Abilities	3
307-198	ECE: Admin an ECE Program	3
* 307-199	ECE: Practicum 4.....	3
+ * 809-172	Race Ethnic & Diversity	3
Choose 1 course from the following:		
+ 801-196	Oral/Interpersonal Comm	3
+ 801-198	Speech	3
	Elective.....	3
Total Credits.....		18

+ *May be offered as distance learning*

* *Prerequisite required; see course description*

Minimum Program Credits Required - 69

For a complete listing of course descriptions see back of catalog.

307-148 ECE: Foundations of ECE

This course introduces you to the early childhood profession. Course competencies include: integration of strategies that support diversity and anti-bias perspectives; investigate the history of early childhood education; summarize types of early childhood education settings; identify the components of a quality early childhood education program; summarize responsibilities of early childhood education professionals; explore early childhood curriculum models. Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

307-151 ECE: Infant & Toddler Dev

In this course you will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; analyze development of infants and toddlers (conception to three years); correlate prenatal conditions with development; summarize child development theories; analyze the role of heredity and the environment; examine research-based models; examine culturally and developmentally appropriate environments for infants and toddlers. Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

307-166 ECE: Curriculum Planning

This course examines the components of curriculum planning in early childhood education. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play; establish a developmentally appropriate environment; examine caregiving routines as curriculum; develop activity plans that promote child development and learning; develop unit plans that promote child development and learning; analyze early childhood curriculum models. Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

Notes

Offered in Eau Claire • August entry date

31-413-2

If you enjoy working outdoors and like solving problems with both your head and your hands, the Electrical Power Distribution program might be a good match for you. Graduates of this program are helping to keep our country's electrical distribution network in good working order and expanding the network to provide better service.

The program includes instruction in the fundamentals of electrical theory. Through classroom and outdoor lab activities you'll learn the skills you need to succeed in this career area:

- Operate line equipment
- Climb distribution and transmission structures
- Build and maintain overhead and underground power lines
- Install transformers, capacitors, and KWH meters
- Tie rope knots and make rope splices
- Perform hotline maintenance

You'll learn how to use protective equipment such as fuses, circuit breakers, and lightning arrestors. You'll operate hydraulic equipment

such as aerial lift trucks, digger/derrick trucks, and trencher/backhoes. You'll receive training in performing first aid, CPR, and AED (Automatic External Defibrillator). And since you'll need a commercial driver's license to operate equipment, a one-credit Class "A" CDL course is included in the program.

To succeed, you'll need good reading and math skills. As a student, you'll be subject to random controlled substance and alcohol testing. As an employee, you'll need a good driving record.

It's a rewarding, challenging career area. This could be the educational program you're looking for!

Admission Requirements

- COMPASS® pre-entry assessment; performance above minimum scores is highly recommended
- Department of Transportation (DOT) physical exam and controlled substance testing prior to beginning core courses.

Helpful Background

- Electricity
- Mathematics
- Science

Career Opportunities

- Apprentice Lineworker
- Apprentice Substation Electrician
- Apprentice Electrician
- Cable Installer
- Metering Technician
- Temporary Labor for Power Companies



2009-10 Employment Facts

Average Hourly Wage \$16.27
Average Monthly Income \$3067.17

Employers

Alliant Energy; Beaver Dam, WI
Alliant Energy; Madison, WI
Barron Electric; Barron, WI
Great Lakes Line Builders; Greenville, WI
Jackson County Electric; Black River Falls, WI
Moll's Utility Service; Hammond, WI
Richland Electric Cooperative; Richland Center, WI
Riverland Electric; Alma, WI
Riverland Energy Coop; Arcadia, WI
Higher Power LLC; Stanley, WI
Village of New Glarus; New Glarus, WI
Xcel Energy; Eau Claire, WI
Xcel Energy; Mankato, MN
Dairyland Power Cooperative; La Crosse, WI

First Term	Credits
413-303 Elec Power Dist Fund 1A.....	4
413-304 Elec Power Dist Fund 1B.....	4
413-305 Elec Power Dist Fund 1C-AppLab.....	5
458-320 CDL License Training.....	1
804-363 Math for Electricity & Electrn.....	2
Choose 2 credits from the following:	
+ * 801-195 Written Communications.....	3
+ 801-351 Applied Communications.....	2
Total Credits.....	18

Second Term	Credits
* 413-306 Elec Power Dist Fund 2A.....	4
* 413-307 Elec Power Dist Fund 2B.....	4
* 413-308 Elec Power Dist Fund 2C-AppLab.....	4
* 806-341 Vocational Science.....	2
809-351 Occupational Relations.....	2
Total Credits.....	16

+ *May be offered as distance learning*
 * *Prerequisite required; see course description*

Minimum Program Credits Required - 34

For a complete listing of course descriptions see back of catalog.

413-303 Elec Power Dist Fund 1A

This course introduces the student to basic electrical theory using Ohm’s Law to analyze series, parallel and combination circuits. Concepts of work, power, energy, and magnetism will be studied. Students will learn basic line construction materials such as insulator design, pole information, and wire size and resistance, with hands on practice on communication signals for lineworkers. Throughout the course there is an emphasis on safety for lineworkers. Co-requisite(s): 413-304 Elec Power Dist Fund 1B and 413-305 Elec Power Dist Fund 1C-AppLab. Restricted to students admitted to the following program(s): 31-413-2 Electrical Power Distribution.

413-304 Elec Power Dist Fund 1B

This course introduces the student to basic A.C. circuits and advances to A.C. circuits with induction and capacitance. The course includes A.C. parallel circuits with resistance, inductive reactance and capacitive reactance. The student will learn guying and anchoring concepts. CPR and Medic First Aid certification will also be included. Throughout the course there is an emphasis on safety for lineworkers. Co-requisite(s): 413-303 Elec Power Dist Fund 1A and 413-305 Elec Power Dist Fund 1C-AppLab. Restricted to students admitted to the following program(s): 31-413-2 Electrical Power Distribution.

413-305 Elec Power Dist Fund 1C-AppLab

This course introduces the student to power line construction techniques including staking/overhead line design, overhead structure specifications, overhead distribution line construction and stringing/sagging overhead line conductors. The course includes basic hydraulics and line truck operation. Ropes, knots, and splices associated with the lineworker trade will be learned and used throughout the course. Electrical connectors will also be covered. Students will learn aerial climbing tools and techniques. Students will use electrical test equipment and hand and power tools associated with the lineworker trade. Throughout the course there is an emphasis on safety for lineworkers. Co-requisite(s): 413-303 Elec Power Dist Fund 1A and 413-304 Elec Power Dist Fund 1B. Restricted to students admitted to the following program(s): 31-413-2 Electrical Power Distribution.

Notes

Electrical Power Distribution

Offered in Eau Claire • August entry date

10-620-1

The Electromechanical Technology program can prepare you for a career in servicing, installing, and repairing the automated equipment used in manufacturing. Automated manufacturing processes are increasing in speed and complexity. For you, that could mean good jobs with good pay.

This could be a good career area for you if you can work in a team environment but also can solve problems and function on your own. You'll need to find solutions rapidly while working on complex mechanical and electrical systems. Successful students have good mechanical aptitude and a curiosity about how things work.

In addition to classroom instruction, you will work on state-of-the-art equipment used in the field. The Electromechanical Technology program can help you develop skills that apply in several career areas:

- Electronics
- Pneumatics

- Hydraulics
- Computers
- Programmable Logic Controllers (PLC)
- Robotics
- Other automated equipment

Graduates of this program work on equipment that makes everything from CDs to computers to food products. If you're interested in gaining the foundation for a lifetime of opportunities in high-tech manufacturing, this could be the program for you.

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment
 - 70 on Reading
 - 35 on Algebra

Helpful Background

- Algebra and geometry
- Computer knowledge
- Ability to work as a team member
- Use of logical problem-solving techniques
- Mechanical aptitude

Career Opportunities

- Systems Technician
- Automated Manufacturing Technician
- Electromechanical Technician
- Technical Support Staff
- Field Service Technician



2009-10 Employment Facts

Average Hourly Wage \$15.97
Average Monthly Income \$3018.44

Employers

CHS; Inver Grove Heights, MN
Cummins Filtration; Bloomer, WI
Edwards Electric Inc.; Stanley, WI
Great Northern Corporation; Chippewa Falls, WI
HTI; Eau Claire, WI
Midwest Manufacturing; Eau Claire, WI
OakRiver Technology; Oakdale, MN
Phillips Plastics Corporation; Menomonie, WI
Preco; Somerset, WI
TTM Technologies; Chippewa Falls, WI
Yale Materials Handling; Eau Claire, WI

First Term		Credits
*	605-107 Basic Electronic	3
	612-101 Related Fluid Power	2
	620-101 Automated Processes	2
+	620-155 Industrial Electronics I	2
	620-193 Electronic Software Applic	2
+ *	801-195 Written Communications	3
Choose 3 credits from the following:		
*	804-113 College Technical Math 1A	3
*	804-115 College Technical Math 1	3
	Total Credits.....	17
Second Term		Credits
*	605-108 Devices & Digital	3
*	605-109 Industrial Computer Technology	3
+ *	620-135 PLC Introduction	2
*	620-156 Industrial Electronics II	2
*	620-158 Sensors & Servo Systems	2
+ *	809-199 Psychology of Human Relations.....	3
Choose 2 credits from the following:		
*	804-114 College Technical Math 1B	2
*	804-115 College Technical Math 1	2
	Total Credits.....	17
Third Term		Credits
*	420-190 Machine Tool Processes	3
	606-185 Blueprint Reading	1
+ *	620-136 PLC Applications	3
	620-144 Applied EM Machine Principles	2
*	620-145 Industrial Robotics Systems	2
*	620-191 Motion Control Applications.....	3
*	806-154 General Physics 1	4
	Total Credits.....	18
Fourth Term		Credits
*	605-152 Real Time Data Acquisition	2
*	620-146 Machine Troubleshooting Tech	2
*	620-147 Control Applications.....	2
*	620-148 EM System Interfacing	4
*	620-150 Instrumentation.....	2
+ *	801-197 Technical Reporting.....	3
+ *	809-195 Economics.....	3
	Total Credits.....	18

+ *May be offered as distance learning*
 * *Prerequisite required; see course description*

Minimum Program Credits Required - 70

For a complete listing of course descriptions see back of catalog.

620-101 Automated Processes

Electromechanical systems and processes used in modern manufacturing facilities. An overview of the manufacturing environment and the role of the electromechanical technician in that environment.

605-152 Real Time Data Acquisition

This course will focus on industrial application of acquiring data from PLC based equipment using industrial and Ethernet networks. Display of data will use industrial display terminals such as the Allen-Bradley Panel View and Microsoft Excel spreadsheet using DDE technology. Prerequisite: Experience in MS Windows and Excel required. Prerequisite(s): 620-136 PLC Applications.

620-136 PLC Applications

Design and add documentation to ladder logic programs to solve application problems. PLC applications examples as used in industry will be programmed on real industry equipment utilizing a wide variety of various sensors, photoelectric, proximity, motor drives, and control devices creating working automated systems. Prerequisite(s): (620-135 PLC Introduction and 620-156 Industrial Electronics II) or (620-130 Industrial Elec Concepts or 414-343 Industrial Electricity Concept and 620-135 PLC Introduction).

620-147 Control Applications

Hands-on in building an automated process controlled by a PLC computer system. Interfacing sensors to detect product types and interfacing motors and solenoids, to control motion. Gives real world interface and wiring situations. Prerequisite(s): 612-101 Related Fluid Power and 620-136 PLC Applications and 620-144 Applied EM Machine Principles and 620-145 Industrial Robotics Systems.

620-158 Sensors & Servo Systems

Theory and application of various types of sensors and Servo/PID control systems. Application, wiring, and configuration of non-contact sensors within automated systems are covered. Theory of servo loops and PID (Proportional, Integral, Derivative) control systems using analog sensors is studied. Prerequisite(s): 620-156 Industrial Electronics II (or taken concurrently).

Notes

Environmental Refrigeration, Air Conditioning, & Heating Service Technician

Technical Diploma
One Year

Offered in Eau Claire • August entry date

31-401-1

If this is how you would describe yourself, you could be a good candidate for the Environmental Refrigeration, Air Conditioning, and Heating Service Technician program:

- Enjoy solving problems
- Good mechanical aptitude
- Can work independently and as a member of a team
- Like working with tools
- Interested in latest energy-saving technologies
- Detail-oriented
- Physically fit

As a graduate of this program, you will be responsible for installation, service and maintenance of refrigeration, air conditioning, and heating equipment as well as geothermal, solar and other renewable energy equipment.

The program prepares you to take the Environmental Protection Agency (EPA) Certification Exam for safe handling of refrigerants. The Industry

Competency Exam (ICE) sponsored by the Air Conditioning and Refrigeration Institute for HVAC/R technicians is a requirement for all students.

Your coursework the first semester covers the fundamentals:

- Gas, oil, and electric furnaces
- Basic refrigeration and air conditioning systems
- HVACR technical problem solving
- Renewable energies
- Related electricity

Your second semester coursework will build on what you've learned, with emphasis on geothermal and solar systems, and HVAC/R maintenance, service, and installation. As part of your program, you'll be provided with hands-on technical installation and service situations to complete.

Nationally there is a shortage of HVAC/R installation, service, and maintenance technicians. This is a career area full of opportunity!

Admission Requirements

- COMPASS® pre-entry assessment

Helpful Background

- Science
- Basic electricity

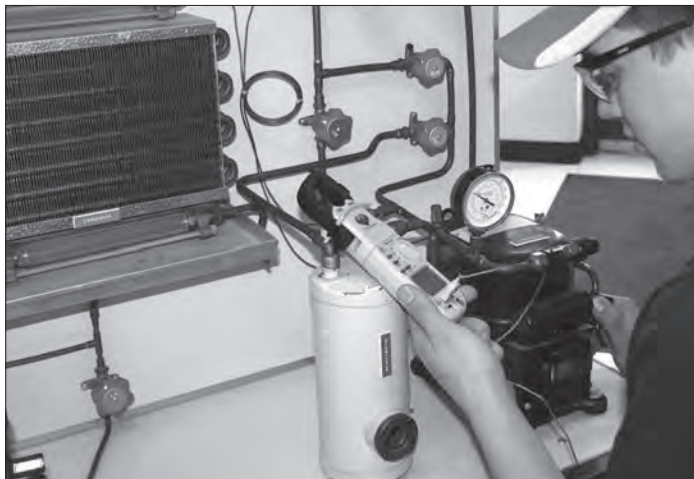
Career Opportunities

- Refrigeration and Air Conditioning Technician
- Field Technician for Manufacturing Firms
- Maintenance Technician for Commercial Buildings
- Heating Service Technician
- Salesperson for HVAC/R Wholesalers

2009-10 Employment Facts

Average Hourly Wage \$17.22

Average Monthly Income \$3294.67



Employers

Courtesy Corporation - McDonalds; Onalaska, WI
Erv Smith; Eau Claire, WI
Metropolitan Service; Eau Claire, WI
University of Wisconsin-Eau Claire; Eau Claire, WI
Cray, Inc.; Chippewa Falls, WI
Ace Methanol; Stanley, WI
Benedict Refrigeration; Altoona, WI

First Term	Credits
* 601-110 Principles of Heat & Air Flow	4
* 601-111 Principles of Refrigeration	2
601-115 Renewable Energies for HVAC	1
* 601-116 Principles of Air Conditioning	2
601-125 Safety-HVAC	1
601-141 Electricity-HVAC.....	3
+ 801-351 Applied Communications.....	2
804-360B Math for Tech Trades-Ref AC Ht	2
Total Credits.....	17

Second Term	Credits
601-120 Geothermal/Solar Applications.....	2
* 601-121 HVAC/R Service & Applications.....	3
601-130 Sheet Metal Layout	1
* 601-142 Schematic Wiring-HVAC	2
* 601-151 Technical Problems-HVAC	3
601-161 HVAC Load Calc & Psychrometrics.....	3
809-351 Occupational Relations.....	2
Total Credits.....	16

+ *May be offered as distance learning*
 * *Prerequisite required; see course description*

Minimum Program Credits Required - 33

For a complete listing of course descriptions see back of catalog.

601-110 Principles of Heat & Air Flow

Gas, oil, and electric heating systems are evaluated and tested. Major components and controls of each heating system are detailed. Operation, service and maintenance are performed on a variety of heating systems. Evaluating the proper airflow patterns for a variety of applications is emphasized. The main objective is to assist the technician to work on a variety of heating systems once the course is completed. Prerequisite(s): 601-141 Electricity-HVAC (or taken concurrently).

601-111 Principles of Refrigeration

The purpose of the course is to assist the student in developing and understanding of the basic refrigeration system. Proper use of tools and test equipment for installation and servicing of domestic and commercial refrigeration systems is covered in detail. Soldering, Brazing and flaring of coppertube systems is an essential skill developed in this course. The safe handling of refrigerants along with EPA refrigerant handling certification is a priority. Prerequisite(s): 601-141 Electricity-HVAC (or taken concurrently) or 401-351 Basic Electricity HVACR.

601-115 Renewable Energies for HVAC

The purpose of this course is to introduce the student to renewable energy sources and emerging careers in renewable energy. Students will examine geothermal, photovoltaic, solar thermal systems, green building, wind power and others. Basic design, function, cost and other considerations associated with renewable energy sources will be evaluated. Restricted to students admitted to the following program(s): 10-601-1 Air Cond, Heating & Refrig Tech, 31-401-1 Refrig. A/C Htg. Service Tech.

601-130 Sheet Metal Layout

The student will layout and fabricate a variety of sheet metal fittings. Safe working practices are reviewed and stressed. The proper use of hand tools, shears, benders and other types of sheet metal equipment are detailed and demonstrated. One and two piece duct, reducers, elbows, offsets, plenums, drive cleats, S-locks, and square to round transitions are fabricated and assembled.

Notes

Environmental Refrigeration, Air Cond, & Heating Service Technician

Offered at several locations throughout the district • day and evening

30-090-1

The Farm Business & Production Management is designed to further your education in production agriculture, if you are just entering this career area or have years of experience:

- Farmers
- Farm family members
- Farm employees
- Ag professionals
- FSA borrowers
- Bankers and lenders
- Non-traditional farmers

Day and evening courses are offered to provide you with practical information you can use immediately:

- Farm Business Production Management – Six courses offered; topics include crop production, land use management, livestock production, financial and business planning, and livestock health and biosecurity.

- Top Operator Management – Three courses offered in a three-year rotation; topics include health and nutrition, risk management and environmental issues, and enterprise growth issues and strategies.
- Cash Grain Production – Three courses offered in a three-year rotation; topics include agronomy cultural practices, facilities and equipment management, and marketing and financial management.

In addition to classroom experiences, you'll receive individualized instruction:

- Implementing technologies, including computer assistance
- Farm business analysis, financial planning, and record keeping assistance
- Livestock housing, forages, and rations

Admission Requirements

- Must be engaged in production agriculture or interested in learning more about production agriculture
- Contact local farm business instructor or call Farm Business & Production Management program at 715-852-1384

Helpful Background

- High school agriculture
- Business management

Career Opportunities

- Farm Owner/Operator
- Farm Manager
- Farm Worker
- Agriculture Industry Professional

2009-10 Employment Facts

Average Hourly Wage \$11.29

Average Monthly Income - income varies widely depending on agriculture market factors.

Employers

- Self-Employed



First Term	Credits
090-310 Farm Bus Planning & Risk Mgmt.....	4
090-320 Land Use Management	4
090-330 Precisn Agronomics & Energy Mgmt.....	4
090-340 Livestock Nutrition & Reproductn.....	4
090-350 Farm Bus Analysis & Mrkt Strat.....	4
090-360 Livestk Fac, Health & Biosecurity	4
Total Credits.....	24

Minimum Program Credits Required - 24

For a complete listing of course descriptions see back of catalog.

090-310 Farm Bus Planning & Risk Mgmt

Emphasizes management skills and concepts necessary for farming in today’s changing technology and farm business financing. Organize and maintain farm business records, interpret and analyze the records to assist in making sound farm management decisions. Entire farming operation is assessed and plans are developed for future needs, goals and objectives. Restricted to students admitted to the following program(s): 30-090-1 Farm Bus & Production Mgmt.

090-320 Land Use Management

Prepare for land use and nutrient management, develop plan for equipment maintenance and replacement, study alternative energy sources, implement a farm safety plan, and implement environmental land use recommendations. Restricted to students admitted to the following program(s): 30-090-1 Farm Bus & Production Mgmt.

090-330 Precisn Agronomics & Energy Mgmt

Crop management, including planning, planting, care, harvesting, storage, and marketing. Restricted to students admitted to the following program(s): 30-090-1 Farm Bus & Production Mgmt.

090-340 Livestock Nutrition & Reproductn

Apply livestock nutrition principles and complete a farm business analysis. Restricted to students admitted to the following program(s): 30-090-1 Farm Bus & Production Mgmt.

090-350 Farm Bus Analysis & Mrkt Strat

Computerized financial records, credit, budgeting, farm estate planning, financial analysis, and risk management. Restricted to students admitted to the following program(s): 30-090-1 Farm Bus & Production Mgmt.

090-360 Livestk Fac, Health & Biosecurity

Dairy production including housing youngstock, breeding and sire selection, herd health, quality milk production, and marketing. Restricted to students admitted to the following program(s): 30-090-1 Farm Bus & Production Mgmt.

Notes

Offered in Eau Claire • January entry date

10-531-2

If you keep a clear head during emergencies and want to help people in need, the FireMedic program could be a good match for you.

This program prepares you for a career in fire service and paramedic arenas. It's a career area that requires highly developed character:

- Emotional stability and maturity
- Good verbal and written communication skills
- Good math and mechanical ability
- Ability to display good judgment under stress
- Caring for and empathy toward all people

Your coursework focuses on preparing you to respond to the diverse incidents of today's emergency service. Your program will include special courses in water, confined space, trench, high angle, and vehicle extrication rescue. When you finish the program you are prepared to take the National Registry for Emergency Medical Technician-Paramedic (EMT-Paramedic), State of Wisconsin Firefighter I and Fire Apparatus Driver Operator Certification Exams.

While most graduates seek employment as career firefighters/paramedics, you have other opportunities. Your combined training in firefighting and paramedics strengthens your chances for placement in a related field. Your career path may lead you to working as a member of an industrial emergency response team or serving as a representative for a fire/emergency medical equipment vendor. According to the U.S. Department of Labor, the employment outlook for firefighters and paramedics is good. You have opportunities and options!

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment
80 on Reading
45 on Pre-Algebra
- High school diploma or its equivalent
- A minimum 12th grade reading level is required in order to be able to read texts and codes
- Good math skills
- Required Information Session (RIS)
- Wisconsin criminal background check (requires a processing fee)
- American Heart Association CPR for Health Care Providers or American Red Cross Professional Rescuers certification
- Basic EMT Wisconsin License or eligible
- CVTC approved medical exam
- Good physical condition, to pass required physical ability examinations
- No physical impediments to interfere with performing strenuous firefighting work

Helpful Background

- Three to four years of English
- Speech
- Two years of math (college prep)
- Chemistry
- Computer skills
- Fitness classes

Career Opportunities

- Firefighter
- Paramedic
- Firefighter/Paramedic
- Supervisor

2009-10 Employment Facts

Average Entry Hourly Wage \$14.88
Average Monthly Income \$3333.33
(Based on 56 hours per week)

Employers

Fire departments throughout Wisconsin and the Midwest: Chippewa, Chippewa Fire District, La Crosse, Marshfield, Menomonie, Green Bay, Eau Claire, Oshkosh, Stevens Point
Red Wing Fire Department; Red Wing, MN
Biolife Plasma Services; Eau Claire, WI
Lifelink; Minneapolis, MN



First Term	Credits
• 503-105 Principles of Firefighting	3
* • 503-107 Fire Dept Apparatus Ops	3
+ * • 801-195 Written Communications	3
• 804-107 College Mathematics	3
+ * • 809-172 Race Ethnic & Diversity	3
+ * • 809-198 Intro to Psychology	3
Total Credits	18
Second Term	Credits
• 503-106 Fire Inspection Services	2
• 503-141 Special Rescue	3
+ • 801-196 Oral/Interpersonal Comm	3
+ * • 809-188 Developmental Psychology	3
+ * • 809-196 Intro to Sociology	3
Total Credits	14
Third Term	Credits
* • 531-140 FireMedic Fundamentals	5
* • 531-152 Paramedic Pharmacology	4
* • 531-155 Respiratory Management	2
* • 531-156 Cardiology 1	3
* • 531-157 Clinical 1-EMT/Paramedic	4
Total Credits	18
Fourth Term	Credits
* • 531-158 Cardiology 2	3
* • 531-159 Medical Emergencies	3
Total Credits	6
Fifth Term	Credits
* • 503-130 Fire Internship	2
* • 531-164 Trauma	3
* • 531-165 Emergency Care for Specialists	3
* • 531-166 EMS Operations	3
* • 531-167 Clinical 2-EMT/Paramedic	3
Total Credits	14

- + *May be offered as distance learning*
- * *Prerequisite required; see course description*
- *A grade of "C" or better is required*

Minimum Program Credits Required - 70

For a complete listing of course descriptions see back of catalog.

503-105 Principles of Firefighting

This course introduces the student to the basic skills and techniques used in firefighting. Classroom instruction includes a variety of fire-related topics which are reinforced and enhanced through practical skills activities. The course content follows the requirements for NFPA 1001 Firefighter I. Upon completion, the student is eligible to test for state fire certification. Restricted to students admitted to the following program(s): 10-531-2 FireMedic.

503-106 Fire Inspection Services

This course familiarizes the students with state and local statutes and national codes relating to fire prevention. The course requires the completion of actual inspections and pre-plans. In addition, the course has a public education section which requires students to present fire safety for all age groups. Restricted to students admitted to the following program(s): 10-531-2 FireMedic.

503-107 Fire Dept Apparatus Ops

This course prepares firefighters to drive and operate fire department emergency apparatus. The course presents theories of hydraulics as applied to the fire service, with emphasis on mathematics, and formulas used in operating fire apparatus pumps. Students receive lecture and practical training on maintenance, driving, operating on-board pumps and equipment, and apparatus testing. The course content meets the NFPA 1002 requirement for fire department pumper driver/operator. Prerequisite(s): 503-105 Principles of Firefighting (or taken concurrently). Restricted to students admitted to the following program(s): 10-531-2 FireMedic.

503-141 Special Rescue

This course introduces the various types of special rescues required by many fire/EMS organizations. Classroom presentations and practical evolutions will be conducted on Confined Space and Trench Entry and Rescue, Water Rescue, Vehicle Extrication, and High Angle Rescue. Restricted to students admitted to the following program(s): 10-531-2 FireMedic

Notes

Offered in Eau Claire • August and January entry dates

10-530-1

If you are interested in combining an aptitude and interest in healthcare with computer technology, consider the Health Information Technology (HIT) program.

This program can prepare you for a role in the health information management (HIM) profession working “behind the scenes” (not in patient care) in healthcare settings:

- Collect, maintain, analyze, and disseminate clinical data
- Code medical information for research and reimbursement
- Apply legal regulations to maintain the confidentiality and security of patient data

Your program will include health information technology courses, professional practice experiences, technical information technology support courses, and general studies courses. Graduates are eligible to write the national certification examination offered by AHIMA to become a Registered Health Information Technician (RHIT) – credentials required by employers for most positions in this field. The

HIT program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM).

HIT students and professionals are held to high standards. They must model professional behavior, ethics, and appearance. They must follow security, privacy, and confidentiality practices. They also apply organizational management techniques to improve the efficiency of departmental functions and services. It’s a challenging, rewarding career area.

HIM professionals are in high demand throughout the country. You have opportunities!

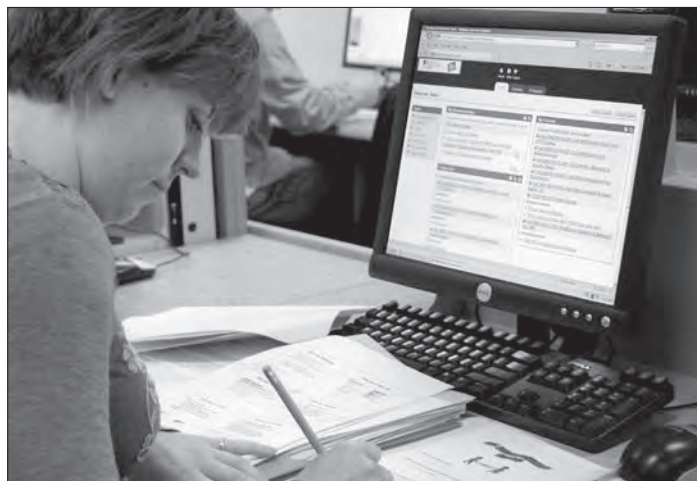
For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment, 80 on Reading 45 on Pre-Algebra, 46 on Writing
- Wisconsin criminal background check (requires a processing fee)
- Biology-two semesters at high school level or one semester at postsecondary level with grade of “C” or better
- A pre-entrance health history and physical examination must be on file three weeks before you enter the core courses of the HIT program. The Admissions Office will notify you at the appropriate time.

Helpful Background

- Strong interest and aptitude in computer information systems and healthcare/health sciences
- Excellent spelling, reading, and proofreading skills
- Microsoft Office skills (Word, Excel, Access)
- Strong written and oral communication skills



Career Opportunities

- Coding Specialist
- Fee and Revenue Technician
- Insurance Claims Analyst
- Reimbursement Coordinator
- Data Quality Manager
- Privacy Officer
- Health Data Analyst
- HIM Department Manager
- Medical Staff Coordinator
- HIM Compliance Specialist
- Health Information Technician
- Clinical Documentation Specialist
- Patient Information Coordinator
- Utilization Management Coordinator

2009-10 Employment Facts

Average Hourly Wage \$13.44
Average Monthly Income \$2244.99

Employers

Bay Area Medical Center; Marinette, WI
Chippewa Valley Technical College Dental Clinic; Eau Claire, WI
Comforts of Home; Chippewa Falls, WI
Community Health Partnerships; Eau Claire, WI
Cvikota; Eau Claire, WI
Dove Nursing & Rehabilitation; Eau Claire, WI
Eau Claire Women’s Care; Eau Claire, WI
Luther Hospital; Eau Claire, WI
Luther Midelfort Chippewa Valley; Bloomer, WI
Luther Midelfort Oakridge - Osseo; Osseo, WI
Luther Midelfort; Eau Claire, WI
Luther-Midelfort Northland; Barron, WI
Marshfield Clinic St. Joseph’s Hospital; Marshfield, WI

First Term	Credits
+ • 103-102 Microsoft Office Suite	2
+ • 501-101 Medical Terminology.....	3
+ • 530-172 Healthcare Delivery Systems	2
+ * • 530-176 Health Data Management	2
+ • 530-181 Intro to the Health Record	1
+ * • 801-195 Written Communications	3
* • 806-177 General Anatomy & Physiology.....	4
Total Credits.....	17

Second Term	Credits
* • 530-178 Hlthcare Law & Ethics	2
+ * • 530-182 Human Diseases for Hlth Profes	3
* • 530-184 CPT Coding	3
• 530-197 ICD Diagnosis Coding.....	3
• 530-199 ICD Procedure Coding	2
+ * • 804-123 Math w Business Apps	3
Total Credits.....	16

Third Term	Credits
+ • 801-196 Oral/Interpersonal Comm	3
Choose 3 credits from the following:	
+ * • 809-198 Intro to Psychology	3
+ * • 809-199 Psychology of Human Relations.....	3
Total Credits.....	6

Fourth Term	Credits
* • 530-177 Hlthcare Statistics & Research.....	2
* • 530-185 Healthcare Reimbursement	2
* • 530-190 Healthcare Information Systems	3
* • 530-195 Applied Coding	2
* • 530-196 Professional Prac Experience 1	3
Choose 1 course(s) from the following:	
+ * • 809-174 Social Problems	3
+ * • 809-196 Intro to Sociology	3
Total Credits.....	15

Fifth Term	Credits
* • 530-150 Applied HIM Technology	3
* • 530-193 Healthcare Quality Management.....	2
* • 530-194 HIM Organizational Resources.....	2
* • 530-198 Professional Prac Experience 2	3
Choose 1 course(s) from the following:	
+ * • 809-172 Race Ethnic & Diversity.....	3
+ * • 809-195 Economics.....	3
+ * • 809-197 Contemporary American Society.....	3
Total Credits.....	13

+ May be offered as distance learning
 * Prerequisite required; see course description
 • A grade of "C" or better is required

Minimum Program Credits Required - 67

For a complete listing of course descriptions see back of catalog.

530-178 Hlthcare Law & Ethics

Examines regulations for the content, use, confidentiality, disclosure, and retention of health information. An overview of the legal system and ethical issues are addressed. Prerequisite(s): 530-176 Health Data Management. Restricted to students admitted to the following program(s): 10-530-1 Health Information Technology.

530-177 Hlthcare Statistics & Research

Explores the management of medical data for statistical purposes. Focuses on descriptive statistics, including definitions, collection, calculation, compilation, and display of numerical data. Vital statistics, registries, and research are examined. Prerequisite(s): 530-176 Health Data Management and 804-106 Intro to College Math.

530-190 Healthcare Information Systems

Emphasizes the role of information technology in healthcare through an investigation of the electronic health record (EHR), business, and health information software applications. Learners will develop skills to assist in information systems design and implementation. Prerequisite(s): 106-144 Sprdsheet & Dbase Applic, Int and 150-101 PC, Networkg & Security Basics and 530-176 Health Data Management.

530-195 Applied Coding

Prepares students to assign ICD and CPT/HCPCS codes supported by medical documentation with intermediate level of proficiency. Students will prepare appropriate physician queries in accordance with compliance guidelines and will assign codes to optimize appropriate reimbursement. Prerequisite(s): 530-183 ICD-9-CM Coding and 530-184 Current Proc Term (CPT) Coding (or taken concurrently) and 530-185 Health Care Reimbursement (or taken concurrently).

530-172 Healthcare Delivery Systems

Examines the organization, financing, regulation, and delivery of health care services. Includes the study of health care professionals.

Notes

Offered in Eau Claire • August and January entry dates

10-196-4

If you're interested in helping others, working as a member of a team, and have good communication skills, a career in human resources could be a good match for you.

Human resources play a critical role in the success of any organization. With the employment picture rapidly changing, human resources professionals have diverse career opportunities. CVTC's Human Resource program is your first step toward a rewarding career.

This program includes an internship and covers the key areas within human resources. You'll learn how to

- Recruit and select qualified candidates for available positions.
- Understand and apply employment laws.
- Organize and promote safety, health, and wellness programs.
- Coordinate employee training sessions.
- Administer benefit and payroll programs.
- Maintain employee records and documentation.

- Create an employment improvement plan.
- Act professionally and ethically in a work setting.
- Acquire human and employee relation skills
- Learn the role of HR in the workplace

Graduates pursue careers as HR generalists, recruiters, trainers, payroll administrators and other human resource specialists in private industry, nonprofit organizations and government agencies. This program could be what you need to begin a rewarding career!

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment

Helpful Background

- Good communication skills
- Ability to work collaboratively
- Excellent interpersonal and professional skills

This program includes an 80-hour internship during the final semester. You will coordinate with your instructor to locate an appropriate internship site. The internship may be paid or unpaid.

Career Opportunities

- Human Resource Generalist
- Recruiter
- Staffing Coordinator

- Human Resource Specialist
- Payroll Assistant
- Benefits Coordinator
- Human Resource Assistant

2009-10 Employment Facts

This is a new program; graduate employment information is not available.

Employers

This is a new program; graduate employment information is not available.



First Term		Credits
+	102-111 Human Resources, Intro to.....	3
+	102-131 Introduction to Business.....	3
+	103-102 Microsoft Office Suite.....	2
+	104-102 Marketing Principles.....	3
+	* 801-195 Written Communications.....	3
+	* 809-198 Intro to Psychology.....	3
Total Credits.....		17

Second Term		Credits
+	102-112 Principles of Management.....	3
+	104-104 Professional Selling.....	3
*	196-127 Employee Relations.....	3
+	* 801-196 Oral/Interpersonal Comm.....	3
Choose 3 credits from the following:		
+	101-105 Accounting, Intro to.....	3
+	101-111 Accounting I.....	4
Total Credits.....		15

Third Term		Credits
+	102-113 Business Ethics.....	3
	196-110 Employee Benefits.....	3
+	196-113 Human Resource Law.....	3
+	196-114 Recruitment & Selection.....	3
+	801-198 Speech.....	3
+	* 809-195 Economics.....	3
Total Credits.....		18

Fourth Term		Credits
+	101-121 Payroll Accounting.....	2
+	196-111 Perform Mgmt & Empl Reward Sys.....	3
*	196-128 Human Resources Internship.....	1
+	196-136 Safety in the Workplace.....	3
+	* 809-172 Race Ethnic & Diversity.....	3
Choose 1 course(s) from the following:		
+	196-112 Training Systems.....	3
+	196-190 Leadership Development.....	3
Choose 1 course(s) from the following:		
+	* 804-123 Math w Business Apps.....	3
*	804-189 Introductory Statistics.....	3
Total Credits.....		18

+ May be offered as distance learning
 * Prerequisite required; see course description

Minimum Program Credits Required - 68

- Short-Term Training Certificate(s)
- (TC-196-2) Human Resource Generalist, 15 Credits
- (TC-196-7) Leadership, 12 Credits

Note: Students enrolled in the business management, human resources, or marketing programs will register for the same courses in the first semester of their programs. By the end of the second semester, students must declare which of the three degree programs they intend to complete. Students will have the option to complete more than one program, graduating with double or triple majors.

For a complete listing of course descriptions see back of catalog.

102-111 Human Resources, Intro to

Topics include the nature of employee management, including recruiting, hiring, training, and developing human resources, equal employment opportunity laws, compensation, and performance appraisal.

102-113 Business Ethics

Stresses business ethics and corporate social responsibility in management practices and business activities. Reviews ethical responsibilities and relationships between organizational departments, divisions, business management, and the public. In case studies and discussion groups, students weigh the pros and cons of particular courses of action that affect the individual and corporate enterprise.

196-136 Safety in the Workplace

The learner applies the skills and tools necessary to provide a safe and secure work environment. Each learner will demonstrate the application of safety awareness, federal/state/local compliance, incident investigation and documentation, human relations techniques, safety orientation, inspections, risk analysis, issues of workplace violence, substance abuse, and health hazards, first aid and CPR, fire and electrical safety, emergency preparedness, and liaison with external agencies.

196-110 Employee Benefits

In this course we will examine the wide range of employee benefit programs available today. We will study the types of benefits required by law, the discretionary benefits that employers may offer, the employee services available, and the every dynamic retirement programs used today. An emphasis will be on health insurance, cafeteria plans, and a functional approach to employee benefit planning. A course outcome will be planning and preparing a company sponsored benefit plan.

Notes

Offered in Eau Claire

10-825-1

If you've got a career goal in mind and have not been able to find just the right educational program to help you prepare for it, the Individualized Technical Studies program could be what you're looking for.

This program allows you to combine courses from two or more major areas of study into an Associate of Applied Science Degree that meets your career preparation goals. You begin by completing a program plan outlining your career objectives and the courses you'll need to meet those objectives.

This program is designed to focus on your needs and plans:

- Provides the flexibility to meet your educational needs based on your career goals
- Accepts that your goals cannot be achieved through enrollment in any single instructional program offered at CVTC, and allows you to create your own educational program

- Allows you to pursue the Associate of Applied Science Degree full- or part-time
- Works with employers to provide a flexible program of study to meet the educational needs of their employees

The Individualized Technical Studies program may be just what you need to help take your career to the next level.

Admission Requirements

To be admitted to the first 32 credits of this program you must meet specific requirements:

- COMPASS pre-entry assessment
- Have a specific career objective around which to design a program
- Show that your proposed program is different from existing Wisconsin Technical College System offerings

Additional steps are required for you to continue beyond 32 credits:

- Approval of a complete academic plan of all courses required to meet the program career objective
- Individualized Technical Studies Committee approval

Helpful Background

- Currently employed (preferred) or significant work experience to draw upon (up to 20 credits may be granted for approved work experience)

Career Opportunities

Jobs/positions that reflect your self-identified career goals

2009-10 Employment Facts

Average Hourly Wage: \$19.23

Average Monthly Income: \$3333.33

Employers

Jobs/positions that reflect your self-identified career goals



First Term **Credits**

Choose 3 credits from the following:

804- Mathematics.....	3
806- Natural Science.....	3

Choose 3 credits from the following:

+ * 809-195 Economics.....	3
+ * 809-196 Intro to Sociology.....	3
+ * 809-197 Contemporary American Society.....	3
Elective	12
Total Credits.....	18

Second Term **Credits**

Choose 3 credits from the following:

+ * 809-198 Intro to Psychology.....	3
+ * 809-199 Psychology of Human Relations.....	3
Elective	12
Total Credits.....	15

Third Term **Credits**

Choose 3 credits from the following:

+ * 801-195 Written Communications.....	3
+ * 801-196 Oral/Interpersonal Comm.....	3
+ * 801-197 Technical Reporting.....	3
+ 801-198 Speech.....	3
+ * 809-195 Economics.....	3
+ * 809-196 Intro to Sociology.....	3
+ * 809-197 Contemporary American Society.....	3
+ * 809-198 Intro to Psychology.....	3
+ * 809-199 Psychology of Human Relations.....	3
Elective	12
Total Credits.....	15

Fourth Term **Credits**

Choose 6 credits from the following:

+ * 801-195 Written Communications.....	3
+ 801-196 Oral/Interpersonal Comm.....	3
+ * 801-197 Technical Reporting.....	3
+ 801-198 Speech.....	3
Elective	10
Total Credits.....	16

+ *May be offered as distance learning*
 * *Prerequisite required; see course description*

Minimum Program Credits Required - 64

For a complete listing of course descriptions see back of catalog.

801-195 Written Communications

Develops writing skills which include prewriting, drafting, revising, and editing. A variety of writing assignments are designed to help the learner analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. It also develops critical reading and thinking skills through the analysis of a variety of written documents. Prerequisite(s): (COMPASS-Writing 46 or ACT English Assessment 17) or (831-103 Intro to College Writing or 801-120 Beginning Composition) or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y).20-800-2 Liberal Arts- Assoc of Science

801-196 Oral/Interpersonal Comm

Focuses upon developing speaking, verbal and nonverbal communication, and listening skills through individual presentations, group activities, and other projects.

801-198 Speech

Explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course.

804- Mathematics

Choose any course(s) that begin with 804.

806- Natural Science

Choose any course(s) that begin with 806.

Notes

Offered in Eau Claire; operates on a year-round basis with multiple entry dates in August, October, January, March, and June. This is a 40 week program.

31-462-2

If you have an interest in working with technology, enjoy troubleshooting systems, and take pride in craftsmanship, the Industrial Mechanic program could be a good match for you.

This program will prepare you to install, maintain, operate, diagnose, and repair automated equipment used in manufacturing industries. Your career could take you to facilities with automated systems that create the products we use every day. The Industrial Mechanics program provides you with the skills you need in essential career areas:

- Mechanics
- Electrical
- HVAC
- Pneumatics
- Troubleshooting
- Welding
- Hydraulics
- Programmable logic controllers (PLCs)
- Maintenance

As a multi-skilled industrial maintenance technician, you will become proficient in areas that greatly enhance your employment opportunities:

- Laser alignment
- Thermal and vibration analysis
- Mechanical equipment installation, disassembly, and assembly
- Pneumatics and hydraulics
- Conveyance systems
- Machine tool
- Automated machine and electrical troubleshooting
- Heating, ventilating, and air conditioning systems
- Welding
- Preventative maintenance
- Programmable logic controllers (PLCs)

Some employers have reported difficulty in recruiting workers with the necessary skills. This could be the career area and educational program you've been searching for!

Admission Requirements

- COMPASS® pre-entry assessment

Helpful Background

- Mechanical aptitude
- Basic math and/or algebra
- Good reading comprehension skills
- Problem-solving skills
- Enjoyment in making things better
- Curiosity about how things work
- Good physical conditioning and agility

Career Opportunities

- Industrial Maintenance Technician
- Industrial Mechanic
- Manufacturing Maintenance Mechanic
- Multi-skilled Maintenance Mechanic

- Repair Technician
- Lab Technician
- Facilities Maintenance Mechanic
- Technical Salesperson

2009-10 Employment Facts

Average Hourly Wage \$15.85

Average Monthly Income \$2986.82

Employers

Contour Plastics; Baldwin, WI

Nestle Nutrition; Eau Claire, WI

Trient Technologies; Woodville, WI



First Term	Credits
419-116 Basic Hydraulics	3
419-117 Basic Pneumatics	3
442-314C Related Weld, Industrial Mech	2
462-110 Mechanical Concepts	4
+ 620-130 Industrial Elec Concepts	3
Total Credits	15
Second Term	Credits
420-346 Related Machine Tool Concepts	2
* 462-320 Centrifugal Pumps & Alignment	4
* 462-321 Repair Automated Mfg Equip	4
* 462-322 Preventative & Periodic Maint	2
462-323 Industrial Mech Documentation	2
* 462-340 Troubleshooting PLC Systems	3
Total Credits	17
Third Term	Credits
* 419-319 Pneumatic System Operations	2
462-311 Mechanical Print Read & Schem	1
* 462-341 Machine Trblsht & Repr, Adv	2
Choose 1 course(s) from the following:	
401-340 Basic HVAC Concepts	2
401-350 Refrigeration Systems	2
* 419-318 Hydraulic System Operations	2
Total Credits	7

+ *May be offered as distance learning*

* *Prerequisite required; see course description*

Minimum Program Credits Required - 39

For a complete listing of course descriptions see back of catalog.

419-116 Basic Hydraulics

This course exposes the student to the theories and basic components of hydraulics. Basic component construction and operation is explored. The theory of function is supplemented by hands on disassembly and assembly of actual industrial components. The course is presented in the individual study mode to allow the students flexibility in scheduling their time. Restricted to students admitted to the following program(s): 31-462-2 Industrial Mechanic.

462-110 Mechanical Concepts

This course is designed to give the student a basic understanding of the mechanical concepts that are found on industrial equipment. Since all industrial machinery is equipped with some type of mechanical drive, a firm understanding of these drives is necessary for the industrial mechanic. Cleanliness and safe working habits will also be emphasized. Restricted to students admitted to the following program(s): 31-462-2 Industrial Mechanic.

462-340 Troubleshooting PLC Systems

This course is designed to use the basic and advanced electrical and electronic control devices in control simulated and actual automated industrial machines. Set up, operation, and system troubleshooting will be emphasized. Motor starters, PLC operations, air logic controllers, and electropneumatic components will be investigated. Prerequisite(s): 419-116 Basic Hydraulics and 419-117 Basic Pneumatics and (462-110 Mechanical Concepts or 462-310 Mechanical Concepts) and (620-130 Industrial Elec Concepts or 414-343 Industrial Electricity Concept). Restricted to students admitted to the following program(s): 31-462-2 Industrial Mechanic.

462-311 Mechanical Print Read & Schem

This course allows the student to learn the symbols used in the maintenance industry and to put those symbols into circuits and diagrams. A unit is also given on blueprint reading consisting of basic symbols and reading the dimensions from various blueprints. Simulation software will be used to demonstrate operation of circuits and design.

Notes

Information Technology - Network Specialist

Associate Degree
Two Years

Offered in Eau Claire • August and January entry dates

10-150-2

If you enjoy problem-solving and working with the latest computer and networking technology, a career in the field of Information Technology is for you. The Information Technology-Network Specialist program prepares you to install, configure, and administer the networking equipment and network services that are common in LAN and WAN environments.

The program provides training on important computer and networking technologies. You'll learn to

- Install and manage network operating systems, including Microsoft Windows, Unix, and Linux.
- Install and troubleshoot client and server computer hardware and software.
- Install and configure thin clients, virtual PCs, and servers.
- Manage various types of directory services.
- Implement network and user security.
- Monitor network event logs for problem resolution.
- Install, configure, and troubleshoot network hardware.

The cost of the following professional certification exams is included in the course fees for the corresponding courses:

Professional Certification Exam	IT-NS course
CompTIA A+	605-128 A+ Review
CompTIA Network+	150-181 Advanced NOS 2
CompTIA Security+	150-184 Network Security

Additionally, after completing the appropriate courses, students may qualify to take the following professional certification exams:

- CISA (Certified Information Systems Auditor)
- CWNA (Certified Wireless Network Administrator)
- CCNA (Cisco Certified Network Associate)
- MCTS (Microsoft Certified Technology Specialist)

Career opportunities continue to grow dramatically, both within the district and nationally. This could be the training you need for a rewarding career!

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment
 - 80 on Reading
 - 45 on Pre-Algebra
 - 46 on Writing

Helpful Background

- Mathematics
- Electronics
- Computer programming or building
- Interpersonal communication
- Critical thinking skills
- Problem-solving ability

Career Opportunities

- Network Specialist: Designs, installs, and maintains computer networks
- Network Administrator: Designs, installs, and maintains network operating systems



- PC/Desktop Support Specialist: Provides on-site hardware and software support to end-users in corporate environments
- IT Field Technician: Provides PC and networking support to remote locations and customers
- Helpdesk Support Technician: Provides PC and networking support to end-users via telephone

2009-10 Employment Facts

Average Hourly Wage \$14.61
Average Monthly Income \$2644.91

Employers

Ashley Furniture; Arcadia, WI
Badger Communications; Durand, WI
Benefit Plan Administrators; Eau Claire, WI
Chippewa Valley Technical College; Eau Claire, WI
Community Health Partnership; Eau Claire, WI
Dahlen Systems; Golden Valley, MN
Digi Quest; Tampa, FL
Eau Claire Area School District; Eau Claire, WI
IDEXX; Eau Claire, WI
Luther Midelfort - Mayo Health System; Eau Claire, WI
Menard, Inc.; Eau Claire, WI
Nestle USA Inc.; Eau Claire, WI
Wild Rose School District; Wild Rose, WI
Wisconsin Independent Networks; Eau Claire, WI

First Term		Credits
+	150-120 Network Diagramming.....	1
	150-123 IT Networking Concepts	3
	150-150 Cisco 1: Network Fundamentals.....	3
	605-134 Network Infrastructure Cncpts	2
+	* 801-195 Written Communications	3
+	* 804-133 Math & Logic.....	3
*	809-166 Intro to Ethics: Theory & App	3
Total Credits.....		18

Second Term		Credits
*	150-151 Cisco 2: Routing Protocol/Conc	3
*	150-160 Network Directory Services	3
*	150-165 Microsoft Windows Network Adm	3
*	150-175 Unix System Administration.....	3
*	605-123 Computer Hardware.....	4
Total Credits.....		16

Third Term		Credits
*	150-153 Cisco 3: LAN Switch & Wireless.....	2
*	150-180 Adv Network Oper Systems 1	3
*	150-183 Wireless Networking	2
*	605-128 A+ Review & Advanced Hardware	3
Choose 1 course(s) from the following:		
*	150-155 IT Management Concepts.....	2
	150-182 Network Specialist Internship.....	2
Choose 1 course(s) from the following:		
+	801-196 Oral/Interpersonal Comm	3
+	* 801-197 Technical Reporting.....	3
Choose 1 course(s) from the following:		
+	* 809-198 Intro to Psychology	3
+	* 809-199 Psychology of Human Relations.....	3
Total Credits.....		18

Fourth Term		Credits
*	150-121 Network Design, Instll & Tblsh	3
*	150-154 Cisco 4: Accessing the WAN	2
*	150-181 Adv Network Oper Systems 2	3
*	150-184 Network Security	2
+	* 809-195 Economics	3
Choose 1 course(s) from the following:		
+	* 809-172 Race Ethnic & Diversity	3
+	* 809-174 Social Problems	3
+	* 809-196 Intro to Sociology	3
Total Credits.....		16

+ May be offered as distance learning

* Prerequisite required; see course description

Minimum Program Credits Required - 68

Short-Term Training Certificate(s)

- (TC-150-1) Cisco Networking Academy, 10 Credits
- (TC-150-2) IT Network Support Associate, 22 Credits
- (TC-150-3) Ntwrk Hdw Support Specialist, 12 Credits

For a complete listing of course descriptions see back of catalog.

150-180 Adv Network Oper Systems 1

This course will provide the learner with the ability to manage servers and network services utilizing a variety of network operating systems common in today's IT environment. This course will provide the learner with the skills necessary to install, configure, and manage servers and network services based on Novell, Unix, and Windows network operating systems. In this course the learner will study how to install servers and how to implement hardware unique to server installations to improve fault tolerance. The learner will acquire the skills needed to configure and manage basic network services such as directory services, DHCP, DNS, FTP, and Web services. The learner will master these skills through interactive lectures, class discussions, product demonstrations, and hands-on lab activities. Prerequisite(s): (150-162 Netware Administration or 107-162 NetWare Administration) and (150-165 Microsoft Windows Network Adm or 107-165 Microsoft Windows Network Adm) and (150-175 Unix System Administration or 107-175 Unix System Administration) and 150-151 Cisco 2: Routing Protocol/Conc.

150-183 Wireless Networking

This course is an introduction to wireless local area networks (WLANs). Students will develop, implement, and troubleshoot wireless networks. Students will acquire competencies in wireless technologies, security, and network design practices. Course topics include WLAN setup and troubleshooting, 802.11a, 802.11b, 802.11g, and 802.11n technologies, products and solutions, site surveys, resilient WLAN design, installation and configuration, WLAN security, and vendor interoperability strategies. The course will be delivered via a combination of lecture/discussion and hands-on application laboratory. Prerequisite(s): 150-151 Cisco 2: Routing Protocol/Conc or 605-109 Industrial Computer Technology.

150-184 Network Security

This course will utilize a hands-on approach to teach students to design and implement network security solutions that will reduce the risk of revenue loss and vulnerability. Topics include overall security processes, security policy design and management, security technologies, products and solutions, firewall and secure router design, installation, configuration, and maintenance. Prerequisite(s): 150-153 Cisco 3: LAN Switch & Wireless and 150-180 Adv Network Oper Systems 1.

Notes

Information Technology - Programmer/Analyst

Associate Degree
Two Years

Offered in Eau Claire • August and January entry dates

10-152-1

If you enjoy working with computers and welcome the chance to try new applications and programs, the Information Technology-Programmer/Analyst program could be a good match for you. During your program, you will

- Develop dynamic Web and mobile applications using state-of-the-art tools: XHTML/CSS, ASP.NET, Java, JSP, JavaScript, XML/AJAX, Flash, and PHP.
- Manage data and databases using SQL, MS Access, SQL Server, and MySQL.
- Design and write computer programs using Java, C++, and Visual Basic.Net.
- Develop 3D simulation/games using latest game engines and 3D modeling software.
- Analyze business processes and apply solutions with Agile software development and industry-standard reporting tools such as SSRS and Crystal.
- Explore operating systems and platforms, including UNIX, Windows, and emerging mobile technologies.

- Develop valuable workplace skills: time management, collaboration, communication, critical thinking, and environmental awareness.

The programmer/analyst track prepares you for a career in Web programming and application software development. The simulation track prepares you for a career developing 2D and 3D multimedia, simulation, games, and Web application development.

Interest in computer simulation and gaming is at an all-time high, and new computer applications are always in development. The Information Technology – Programmer/Analyst program could be what you need to turn your interest in computers into a lifelong career. Graduates of this program also have the opportunity to transfer their credits to selected four-year institutions.

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment
80 on Reading
45 on Pre-Algebra

Helpful Background

- Math and algebra
- Business courses
- Communication skills
- Understanding of Internet technologies
- Computer programming
- Good reading comprehension

Career Opportunities

- Web Programmer/Developer
- Webmaster
- Applications Programmer/Analyst
- Software Support Technician

- Systems Analyst
- Database Application Developer
- Help Desk Analyst
- Simulation Programmer
- Software Quality Assurance

2009-10 Employment Facts

Average Hourly Wage \$16.05

Average Monthly Income \$2812.71

Employers

Choice Products USA, LLC.; Eau Claire, WI
Fidelity Residential Solutions; Eden Prairie, MN
Great Lakes Higher Education; Eau Claire, WI
IDEXX; Eau Claire, WI
Menards; Eau Claire, WI
PESI; Eau Claire, WI
Robert Half Consulting; Middleton, WI
TTM Technologies; Chippewa Falls, WI
Terra Spectrum Technologies; Des Moines, IA



First Term		Credits
+	152-101 Programming Fund - Java Script	3
	152-102 IT-Progrmr Analyst Exploration	1
+	152-106 Operating Systems.....	2
+	152-107 Web 1-XHTML & CSS.....	3
+	* 152-132 Database 1	3
+	* 809-197 Contemporary American Society.....	3
Total Credits.....		15

Second Term		Credits
*	152-103 .NET-VB	3
+	* 152-108 Web 2-JavaScript & PHP.....	3
*	152-142 OO Analysis & Design-Java.....	3
+	* 801-195 Written Communications	3
+	* 804-133 Math & Logic.....	3
Choose 1 course(s) from the following:		
*	152-136 Database 2	3
	152-161 3D Modeling 1	3
Total Credits.....		18

Third Term		Credits
*	152-129 Java Web Programming	3
*	152-164 Web 3	3
+	801-196 Oral/Interpersonal Comm	3
+	* 809-199 Psychology of Human Relations	3
Choose 1 course(s) from the following:		
*	152-105 .NET-ASP	3
*	152-162 3D Game/Simulation Programming	3
Choose 1 course(s) from the following:		
+	* 152-159 Web Multimedia	3
+	* 152-160 C++ Programming.....	3
Total Credits.....		18

Fourth Term		Credits
+	* 801-197 Technical Reporting	3
*	804-189 Introductory Statistics	3
Choose 1 course(s) from the following:		
+	* 152-109 Software Design Patterns	3
*	152-165 3D Modeling 2	3
Choose 1 course(s) from the following:		
+	* 152-112 Business Intelligence	3
*	152-151 Mobile Application Development	3
Choose 1 course(s) from the following:		
	152-126 Agile Programming	3
*	152-168 Multimedia Program & Design	3
Choose 1 course(s) from the following:		
*	152-166 IT-P/A Capstone	2
*	152-182 Programmer/Analyst Internship	2
Total Credits.....		17

+ *May be offered as distance learning*
 * *Prerequisite required; see course description*

Minimum Program Credits Required - 68

Short-Term Training Certificate(s)

- (TC-152-10) Web Multimedia, 11 Credits
- (TC-152-11) Dbase Analysis & Development, 11 Credits
- (TC-152-13) 3D Game/Sim Programming 2, 6 Credits
- (TC-152-5) 3D Game/Sim Programming 1, 12 Credits

- (TC-152-6) Java, 14 Credits
- (TC-152-7) .NET - VB/ASP, 15 Credits
- (TC-152-8) Web Development 1, 12 Credits
- (TC-152-9) Web Development 2, 11 Credits

For a complete listing of course descriptions see back of catalog.

152-107 Web 1-XHTML & CSS

Create dynamic Web pages using XHTML and Cascading Style Sheets (CSS). Basic knowledge of the Internet recommended. An online offering of this course is available. Restricted to students admitted to the following program(s): 10-152-1 IT-Programmer/Analyst.

152-129 Java Web Programming

Students will write programs using the latest Sun Java release. The focus of the class is on the use of advanced Java features necessary for real world business applications. The class will review and extend knowledge of Java; namely, Input/Output, Exception classes and packages. New material emphasized will include Collections, JDBC, Servlets and Java Server Pages. Prerequisite(s): 152-142 OO Analysis & Design-Java or 107-142 Java Programming I.

152-132 Database 1

This course introduces students to SQL (Structured Query Language). Through hands-on activities in and outside the classroom, students practice using SQL to create, populate, manipulate, and query multi-table relational databases. Relational concepts, such as relation table rules and relational algebra, are reviewed and applied as students work with SQL both interactively and in scripts, and in both MySQL and Oracle environments. Prerequisite(s): 152-101 Programming Fund - Java Script (or taken concurrently). Restricted to students admitted to the following program(s): 10-152-1 IT-Programmer/Analyst.

Notes

Information Technology - Programmer/Analyst

Offered in Eau Claire • August entry date

10-001-1

If this is how you would describe yourself, the Landscape, Plant & Turf Management-Horticulture program may be what you need to begin a rewarding career:

- Interested in plants and/or landscaping
- Enjoy working outdoors
- Prefer a hands-on career field
- Have an eye for detail
- Learn quickly

You'll be provided with well-rounded horticultural training, real-life experience, and the business skills necessary for a life-long career owning, managing, or working in a horticulture business in an environmentally sustainable and financially profitable manner. The program provides you with a broad background in landscape and turf management, plant selection, certified pesticide application training, working with diverse populations, and environmentally sustainable management practices.

This is a broad-based program, and you will receive training in all core career components:

- Landscape Management
- Golf Course & Athletic Field Management
- Greenhouse Operation and Management
- Interior Landscaping
- Vegetable & Fruit Production

Communities, businesses, golf courses, and institutions such as universities recognize the importance of good landscaping and are expected to continue to provide good employment opportunities for landscape, plant, and turf management specialists. More and more homeowners are contracting with outside firms to maintain their landscaping. Interest in locally-produced foods is growing. All of these trends point to good career opportunities. You have options!

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

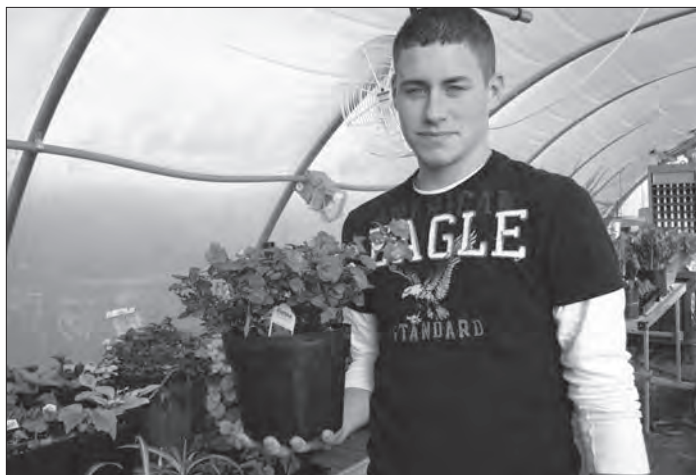
- COMPASS® pre-entry assessment

Helpful Background

- Agriculture
- Science
- Basic computer skills
- Economics

Career Opportunities

- Landscape Installer
- Landscape Design/Sales
- Landscape Crew Member
- Landscape Supply Sales
- Native Prairie Nursery Crew Member
- Plant Health Care Technician
- Grounds Manager
- Grounds Crew Member



- Garden Center Manager
- Garden Center Customer Service
- Nursery Production
- Greenhouse Supervisor
- Assistant Greenhouse Grower
- Pest Control Specialist
- Golf Course Maintenance Assistant
- Golf Course Assistant Superintendent
- Lawn Care Equipment Operator
- Turf Technician
- Athletic Field Manager
- Grounds Crew Member
- Property Care Maintenance
- Irrigation Technician
- Lead Gardener
- Garden Maintenance
- Interior Plantscaper
- Vegetable and Fruit Grower
- Vineyard Maintenance
- Community-Supported Agriculture (CSA) Crew Member

2009-10 Employment Facts

Average Hourly Wage \$11.94
Average Monthly Income \$2241.33

Employers

Eau Claire School District; Eau Claire, WI
Edina Country Club; Edina, MN
Fryszki's Country Gardens; Eau Claire, WI
Self-Employed; Eau Galle, WI
Wisconsin River Golf Club; Stevens Point, WI

First Term		Credits
	001-100 Horticulture, Introduction to	3
	001-116 Landscape Plants	3
	006-116 Introductory Soils	3
+	102-131 Introduction to Business	3
	804-107 College Mathematics	3
Total Credits.....		15
Second Term		Credits
	001-103 Turf Mgmt & Irrigation Systems.....	2
	001-108 Bus Apps for Green Industry	2
	006-160 Plant Science	3
+ *	801-195 Written Communications	3
*	806-134 General Chemistry.....	4
+ *	809-172 Race Ethnic & Diversity.....	3
Total Credits.....		17
Third Term		Credits
*	001-109 Horticulture Internship.....	3
Total Credits.....		3
Forth Term		Credits
	001-102 Landscape Design &Construction	2
	001-110 Integrated Plant/Pest Mgmt.....	2
	001-111 Sustainable Land Use Mgmt.....	3
	001-112 Interior Plants & Landscaping.....	2
+ *	809-195 Economics.....	3
+ *	809-198 Intro to Psychology.....	3
Total Credits.....		15
Fifth Term		Credits
	001-104 Greenhouse Management	2
	001-113 Pesticide & Fertilizer App	3
	001-114 Entrepreneurship for Green Ind	2
	001-115 Vegetable and Fruit Production	2
+	196-191 Supervision	3
+	801-196 Oral/Interpersonal Comm	3
	802-102 Spanish for the Green Industry	2
Total Credits.....		17

+ *May be offered as distance learning*

* *Prerequisite required; see course description*

Minimum Program Credits Required - 67

For a complete listing of course descriptions see back of catalog.

001-100 Horticulture, Introduction to

This course provides an overview of the horticulture profession. Its role and importance throughout history, current trends, and career opportunities will be covered. Particular attention is given to horticulture crops and their use, plant classification, plant propagation, and the inter-relationships between the environment, plant growth, and plant development.

001-102 Landscape Design & Construction

Students will learn how to create a sustainable landscape design that is functional, maintainable, environmentally sound, cost effective, and aesthetically pleasing. Emphasis will be on the landscape design sequence and implementation of the completed landscape design.

001-103 Turf Mgmt & Irrigation Systems

Examines how to effectively establish and maintain professional lawn/turf. Covers identification and selection of turf grasses, establishment and maintenance practices. The course will include nutrient needs, integrated pest management, diagnosing problems, corrective strategies, irrigation principles and irrigation implementation.

001-104 Greenhouse Management

A variety of topics fundamental to managing a greenhouse will be addressed in this course. The overall operation of a green house facility including types of structures, heating/cooling options, lighting, insect/disease management, watering methods, and equipment will be examined.

001-111 Sustainable Land Use Mgmt

Analyze the existing landscape to determine the best management practices for the location. Students will gain practical knowledge on procedures for maintaining established landscapes and the economic return. Benefits on well selected and skillful placement of native plant material for the landscape will be an integral part of the overall approach to sustainable land use in this course.

Notes

Landscape, Plant & Turf Management - Horticulture

Offered in Eau Claire, Menomonie, River Falls • August and January entry dates

20-800-2

If you have a wide variety of academic interests or if you are currently uncertain about a specific academic program in which to specialize, the Liberal Arts program may be for you.

Courses in the Liberal Arts program serve two purposes: (1) they may be used toward an Associate of Science degree in Liberal Arts at CVTC; and (2) they may transfer to a university to be included in a baccalaureate (4-year) degree from that university. CVTC's three principal partners in the Liberal Arts program are the University of Wisconsin-Eau Claire, the University of Wisconsin-River Falls, and the University of Wisconsin-Stout.

For students who have not chosen a major field of post-secondary study, enrolling in the Liberal Arts program will offer a variety of general education courses that may prove helpful in that selection process while, at the same time, fulfilling many requirements of a university baccalaureate program.

Students who have chosen a major field of post-secondary study should contact the university to which they may transfer to verify how each of these general education courses will fit into the chosen program.

CVTC counselors are available to assist in the course selection process to assure that selected courses will meet the minimum credit requirements of each area of the Liberal Arts program while also achieving the degree requirements of a specific university baccalaureate program.

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessments.
- Scores listed below apply to 200 level courses in this program:
 - 80 on Reading
 - 66 on Algebra
 - 69 on Writing

Liberal Arts Tuition fees apply

Helpful Background

- College prep course of study in high school including two years of math, English, and social studies
- Strong interest in preparing for the rigors of university-level academics
- Good oral and written communication skills
- Strong reading and problem-solving skills
- Basic computer knowledge (required to complete class assignments)



English/Speech		Credits
+ *	801-219 English Composition I	3
+ *	801-223 English Composition II.....	3
+	810-201 Fundamentals of Speech.....	3
Total Credits.....		9

Math		Credits
+ *	804-224 College Algebra	4
*	804-228 Plane Trigonometry	3
*	804-236 Calculus & Analytic Geometry I	5
Total Credits.....		12

Life Science		Credits
Choose 4 credits from the following:		
*	806-201 Principles of Biology	4
*	806-207 Anatomy & Physiology 1	4
Total Credits.....		4

Physical Science		Credits
Choose 5 credits from the following:		
*	806-245 Principles of Gen Chemistry 1	5
*	806-276 General Physics 1.....	5
Total Credits.....		5

Additional Math/Science		Credits
Choose 4 credits from the following:		
+ *	804-230 Statistics	4
*	804-240 Calculus & Analytic Geometry 2.....	5
*	806-201 Principles of Biology	4
*	806-207 Anatomy & Physiology 1	4
*	806-245 Principles of Gen Chemistry 1	5
*	806-249 Principles of Gen Chemistry 2	5
*	806-276 Principles General Physics 1	5
*	806-280 Principles General Physics 2	5
Total Credits.....		4

Social Science		Credits
Choose 6 credits from the following:		
+ *	803-227 American Government	3
+ *	809-251 General Psychology	3
+ *	809-271 Introductory Sociology.....	3
+ *	809-291 Princ of Econ-Microeconomics.....	3
Total Credits.....		6

UW Offerings Credits

Courses taken from a Wisconsin University in the categories shown below will fulfill the remaining requirements for earning the Liberal Arts Associate of Science Liberal Arts Degree at Chippewa Valley Technical College

801-200	Humanities	9
801-299	Electives for Univ Transfer.....	6
802-200	Foreign Language	4
809-200	Diversity/Ethnic Studies.....	3
857-200	Health and Wellness.....	2
Total Credits.....		24

+ *May be offered as distance learning*
 * *Prerequisite required; see course description*

Minimum Program Credits Required - 64

For a complete listing of course descriptions see back of catalog.

801-219 English Composition 1

Develops critical thinking, reading, writing, listening, and speaking for both exposition and argumentation. Emphasizes clarity, concision, concreteness, synthesis of information, and completeness of expression, supported by reasoning, organization, and language conventions for research, presentations, and other discourse. Prerequisite(s): (COMPASS-Writing 69 or ACT English Assessment 18) or 831-103 Intro to College Writing or (Bachelor’s Science Y or Bachelor’s Arts Y).

806-245 Principles of Gen Chemistry 1

Introduces the laboratory and the scientific method as tools in the study of chemical transformations and the properties of matter. It includes the topics of measurement, chemical nomenclature, chemical reactions and stoichiometry, atomic structure, gas laws, thermochemistry, chemical bonding, kinetics, equilibria, electrochemistry and topics in organic and biochemistry. Qualitative analysis is included in the laboratory course. Prerequisite(s): 836-133 Prep for Basic Chemistry or 856-771 Basic Chemistry Calculations or (Bachelor’s Science Y or Bachelor’s Arts Y) or (COMPASS-Reading 80 or ACT Reading preentry assmt 18) and (COMPASS-Algebra 40 or ACT Mathematics preentry assmt 18) or ACT Science Reasoning assmt 18.

809-271 Introductory Sociology

Defines and examines concepts and realities of social structure, the social processes that shape behavior, culture, socialization, social groups, and social change. Analyzes concepts and phenomena such as complex organizations, roles, stratification, class, inequality, deviance, and race. Examines institutions such as the family, religion, education, politics, economics and the media. Prerequisite(s): (COMPASS-Reading 80 or ACT Reading preentry assmt 18) or (Bachelor’s Science Y or Bachelor’s Arts Y) or (838-104 Intro to College Reading or 808-110 College Reading).

Notes

Liberal Arts - Associate of Science

Offered in Eau Claire; August, October, January, March, and June.

32-420-5

If you are a hands-on person with good mechanical skills who enjoys building or crafting items, the Machine Tooling Technics program could be a good match for you.

This program offers training for employment in mold making, Computer Numerical Control (CNC) Programming, CNC operation, and quality-control inspection. You'll work on state-of-the-art equipment and will gain real-world experience that can be used in today's high-tech manufacturing facilities.

The program is a face-to-face lab-based program combined with online computer-based learning.

You will learn

- How to operate industrial size manual machine tools, engine lathes, milling machines, grinding machines, and drill presses.
- The skill to hold precision tolerances with machine tools.

- The processes of chip removal and material forming.
- The operation and setup of industrial computerized machine tools, milling machines, machining center, and turning centers.
- CAD/CAM computer-aided design/computer-aided machining to manufacture parts.

This is the program for students seeking interesting and challenging work in a clean, high-tech work environment; job stability; and a career that rewards growth and experience. To get an idea if this is the program you've been looking for, contact the program director at 715-874-4641 to schedule a tour of the facilities.

Admission Requirements

- COMPASS® pre-entry assessment

Helpful Background

- General mathematics
- Geometry
- Computers
- Visualization skills
- Mechanical skills
- Communication skills
- Problem-solving ability

Career Opportunities

- Machine Apprentice
- Manual Machinist
- CNC Machine Tool Operator
- CNC Set-Up Machinist

- CNC Machine Tool Programmer
- Mold-Making Apprentice
- Patternmaker
- Machine Shop Supervisor
- Machine Shop Owner

2009-10 Employment Facts

Average Hourly Wage \$16.34

Average Monthly Income \$3140.11

Employers

Advanced Laser Machining; Chippewa Falls, WI

EDI; Chippewa Falls, WI

Extrusion Dies Industries; Chippewa Falls, WI

Graco; Rogers, MN

MRS Machining; Augusta, WI

Tom Skirtic; Eau Claire, WI

W.S. Darley; Chippewa Falls, WI

Wisconsin Metal Fabrication; Chippewa Falls, WI



First Term		Credits
420-300	Machine Shop Theory	1
420-321	Manual Turning Processes	5
420-322	Manual Milling Processes	5
* 420-373	Precision Measurement	1
421-385	Machine Trades Blueprint Rdg	2
804-361	Math 10	2
Total Credits		16
Second Term		Credits
* 420-325	Basic CNC Mill Programming	5
* 420-326	Adv CNC Mill & Grinding Proc	5
* 420-341	Materials for Machinists	2
* 420-380	2-D CAM	2
* 804-362	Math 20	2
Total Credits		16
Third Term		Credits
* 420-330	Basic CNC Lathe Programming	5
* 420-331	Advanced CNC Turning Processes	5
* 420-353	CAM for CNC Lathe	2
* 420-367	3-D CAM	3
Choose 1 credits from the following:		
420-379	Job Skills for Manufacturing	1
+ 801-351	Applied Communications	2
Total Credits		16
Fourth Term		Credits
* 420-351	Advanced CAD/CAM	3
* 420-352	Advanced Technologies in Mfg	5
* 420-355	Competitive Machining Techniqs	5
* 420-382	Swiss 1	3
Total Credits		16

+ *May be offered as distance learning*

* *Prerequisite required; see course description*

Minimum Program Credits Required - 64

Short-Term Training Certificate(s)

- (TC-420-1) Advanced Machining - Swiss, 9 Credits

For a complete listing of course descriptions see back of catalog.

420-300 Machine Shop Theory

Broad theoretical background in machine shop practices which includes milling, turning, grinding, and drilling.

420-321 Manual Turning Processes

This course is intended to develop the fundamental skills for a career in the machining trade. Fundamental processes include; Manual Lathe operation, basic set-up, lay-out, measurement, turning processes, and tool geometry/sharpening. This course requires the purchase of tools and measuring equipment required for working in the Machine Tool lab. Co-requisite(s): 420-322 Manual Milling Processes. Restricted to students admitted to the following program(s): 32-420-5 Machine Tooling Technics.

420-322 Manual Milling Processes

This course expands on the fundamental skills of the machine shop by broadening the student's knowledge base with; Manual mill operation, basic set-up, layout, measurement, drilling and milling processes along with using a variety of milling cutters. Co-requisite(s): 420-321 Manual Turning Processes. Restricted to students admitted to the following program(s): 32-420-5 Machine Tooling Technics.

420-326 Adv CNC Mill & Grinding Proc

This course is designed to expand on a student's foundational skills in programming, setup, and operation of CNC milling machines and surface grinders. Students will develop and apply setup and programming skills using machining centers. Students will also utilize the grinding process to perform secondary operations on in-process parts. Projects will be assigned and completed using Haas machining centers. Prerequisite(s): 420-321 Manual Turning Processes and 420-322 Manual Milling Processes. Co-requisite(s): 420-325 Basic CNC Mill Programming.

Notes

Marketing Management

Associate Degree
Two Years

Offered in Eau Claire • August and January entry dates

10-104-3

If you're a "people person" with a flair for business, the Marketing Management program could be just what you're looking for. This program is a good match for people with an interest in

- Entrepreneurship/Management
- Promotion/Advertising
- Public relations
- Social media marketing
- Customer relationship management
- Sports, entertainment, and event marketing

In this program will you learn how to make strategic marketing decisions regarding product, price, promotion, and distribution to help businesses compete in today's highly competitive marketplace.

You'll receive hands-on learning from class projects, tours, operating your own small business, and completing an internship. Your program will include training in all aspects of marketing:

- Sports, entertainment, and event marketing

- Promotion/advertising methods and techniques
- Effective sales strategies
- Strategic planning for marketing
- Management skills and abilities
- Marketing research
- Small business management
- Technology in marketing

Marketing is the largest occupation in the United States. There are great opportunities in sales, research, promotion/advertising, buying, distribution, and management. A business must successfully meet customer needs and market its products or services. Marketing is more than "selling;" it's a diverse, challenging field offering you many opportunities. This program offers the skills that you need for a truly rewarding career!

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment

Helpful Background

- High school marketing
- High school DECA (co-curricular organization for Marketing students)
- Speech
- Computer literacy
- High school accounting
- Economics
- Entrepreneurship
- General business

CVTC has a very active Collegiate DECA Chapter, and you are encouraged to join. The students are involved in social activities, civic projects, fund raising, and competition in occupational areas with other schools at the regional, state, and national level. There are many opportunities for fun and leadership.



Career Opportunities

- Marketing Manager
- Business Owner/General Manager
- Store Manager
- Sales Manager
- Regional Manager
- Client Services Manager
- Marketing Director
- Public Relations Specialist
- Sales Representative
- Communications Specialist
- Retail Sales Consultant
- Insurance Agent

2009-10 Employment Facts

Average Hourly Wage \$12.51

Average Monthly Income \$2368.90

Employers

Sacred Heart Hospital; Eau Claire, WI
Fastenal; Eau Claire, WI
Chippewa Valley Technical College; Eau Claire, WI
Finish Line Shoes; Eau Claire, WI
Portu-Sunberg Marketing; Minneapolis, MN
Promo Works; Eau Claire, WI
West Business Services (American Express); Eau Claire, WI
Macy's Inc; Eau Claire, WI
Aflac; Eau Claire, WI
Fox Television (Grant Communications); Eau Claire, WI
Eau Claire Indoor Sports Center; Eau Claire, WI
Bothum Automotive; Eau Claire, WI
Digital Edge Marketing; Eau Claire, WI
Chippewa Valley Airport Service; Eau Claire, WI
Sandy's Attic; Eau Claire, WI
Taylor Made Cleaning; Eau Claire, WI

First Term		Credits
+	102-111 Human Resources, Intro to	3
+	102-131 Introduction to Business	3
+	103-102 Microsoft Office Suite	2
+	104-102 Marketing Principles	3
+	* 801-195 Written Communications	3
+	* 809-198 Intro to Psychology	3
Total Credits.....		17

Second Term		Credits
+	102-112 Principles of Management	3
+	104-104 Professional Selling	3
+	* 104-125 Promotion Principles	3
+	801-196 Oral/Interpersonal Comm	3
Choose 3 credits from the following:		
+	101-105 Accounting, Intro to	3
+	101-111 Accounting I.....	4
Total Credits.....		15

Third Term		Credits
+	* 104-105 Marketing Research	3
+	* 104-152 Technology in Marketing	2
	* 104-160 Entertainment/Sports/Event Mkt	3
	* 104-166 Applied Marketing Experience	4
+	801-198 Speech	3
+	* 809-195 Economics	3
Total Credits.....		18

Fourth Term		Credits
+	104-111 Consumer Behavior	3
	* 104-140 Business to Business Selling	3
	* 104-169 Marketing Internship	1
	* 104-182 Prof Development for Marketing	2
	* 104-183 Marketing Management	3
Choose 1 course(s) from the following:		
	* 809-166 Intro to Ethics: Theory & App	3
+	* 809-172 Race Ethnic & Diversity	3
+	* 809-196 Intro to Sociology	3
Choose 1 course(s) from the following:		
+	* 804-123 Math w Business Apps	3
	* 804-189 Introductory Statistics	3
Total Credits.....		18

+ May be offered as distance learning

* Prerequisite required; see course description

Minimum Program Credits Required - 68

Short-Term Training Certificate(s)

- (TC-104-1) Small Business Marketing, 12 Credits
- (TC-104-2) Retail Management, 12 Credits
- (TC-104-3) Marketing Management, 12 Credits
- (TC-104-4) Professional Selling, 12 Credits

Note: Students enrolled in the business management, human resources, or marketing management programs will register for the same courses in the first semester of their programs. Students will have the option to complete more than one program, graduating with double or triple majors.

For a complete listing of course descriptions see back of catalog.

104-160 Entertainment/Sports/Event Mkt

This course will help you develop an understanding of the marketing concepts and theories that apply to entertainment, sports and event marketing (ESEP) industries. The areas that this course will cover include: promotions, sponsorship, proposals and development & implementation of an entertainment and/or sports marketing plan. Students will learn how to use ESEP as a strategic platform to create publicity and brand awareness. Prerequisite(s): 104-102 Marketing Principles and 104-125 Promotion Principles.

104-125 Promotion Principles

Promotion principles refers to non-personal communication about product services, image, or ideas to influence customer behavior. Topics include advertising, sales promotion, visual promotion, public relations, and managing the promotion function. Prerequisite(s): 104-102 Marketing Principles

104-152 Technology in Marketing

This course will focus on the cutting edge of technology used in marketing. Specifically we will research technology that businesses use to attract and maintain customers. In addition we will explore the technology used by marketing managers to efficiently make sound decisions related to marketing. Speakers will be brought in to demonstrate how they use the most recent technologies to search and satisfy their customers. This is a blended course; one day per week students will meet in the computer lab. The rest of the requirements for the course will be met using an online element via Blackboard. Online access is available throughout the college or you may use your home computer for access if you have an internet connection. Prerequisite(s): 104-102 Marketing Principles and 104-125 Promotion Principles.

Notes

Offered in Eau Claire • August and January entry dates

31-509-1

If you enjoy working with people, are detail oriented, have good communication skills, and seek a career in the health care field, the Medical Assistant program could be a good match for you.

Medical assistants help physicians by providing patient care, obtaining vital signs, and assisting with examinations and minor office surgery. Medical assistants also administer injectable medications and perform basic diagnostic testing (e.g. EKGs). They instruct patients about tests, procedures, and treatments. Besides patient care skills, medical assistants also perform administrative and laboratory functions:

- Schedule appointments
- Maintain paper and electronic medical records
- Perform bookkeeping
- Complete insurance forms
- Perform medical correspondence
- Collect specimens
- Prepare lab specimens
- Perform basic laboratory tests

As a graduate of the program, you are eligible to take the American Association of Medical Assistant national certification exam. Upon successful completion of this test, you can use the title Certified Medical Assistant [CMA (AAMA)]. The Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org), upon the recommendation of the Medical Assisting Education Review Board (MAERB). Commission on Accreditation of Allied Health Education Programs, 1361 Park Street, Clearwater, FL 33756, phone 727-210-2350.

The program's goal is to prepare competent entry-level medical assistants in the cognitive (knowledge), and psychomotor (skills), and affective (behavior) learning domains.

There is a strong demand for people who are trained for clinical and administrative duties. This could be an excellent career area for you!

Admission Requirements

- COMPASS® pre-entry assessment, 80 on Reading, 45 on PreAlgebra, 46 on Writing
- Wisconsin criminal background check (requires a processing fee)
- Biology-two semesters at high school level or one semester at postsecondary level with grade of "C" or better
- A pre-entrance health history and physical examination must be on file three weeks before you enter the core courses of the Medical Assistant program. The Admissions Office will notify you at the appropriate time.
- Keyboarding proficiency of 25 words per minute

Helpful Background

- Keyboarding
- MS Word experience
- English (grammar, punctuation, spelling)
- Basic Algebra
- Biology



Career Opportunities

- Medical Assistant
- Appointment Scheduler
- Medical Laboratory Assistant
- Phlebotomist
- Medical Office Receptionist
- Electrocardiogram Technician
- Medical Insurance Clerk
- Dermatology Technician
- Paramedical Examiner
- Resident Care Assistant

2009-10 Employment Facts

Average Hourly Wage \$13.31
Average Monthly Income \$2102.01

Employers

Baldwin Area Medical Clinic; Baldwin, WI
Chrome Clinic; Black River Falls, WI
Gemini Cares; Eau Claire, WI
Health East Maplewood Clinic; Maplewood, MN
Hudson Physicians; Hudson, WI
Luther Hospital; Eau Claire, WI;
Kromrey Chiropractic; Cadott, WI
Marshfield Clinic; Rice Lake, WI
Marshfield Clinic; Eau Claire, WI
Marshfield Clinic; Ladysmith, WI
Our House Assisted Living; Chippewa Falls, WI
Red Cedar Medical Center; Menomonie, WI
Ridgeview Chanhassen Clinic; Chanhassen, MN
River Falls Clinic; River Falls, WI
Stillwater Clinic; Stillwater, MN
Turtle Lake Clinic; Turtle Lake, WI
Western Wisconsin Urology; Eau Claire, WI

First Term	Credits
+ • 103-102 Microsoft Office Suite	2
+ • 501-101 Medical Terminology.....	3
+ * • 509-301 Medical Asst Admin Procedures.....	2
+ * • 509-302 Human Body in Health & Disease	3
• 509-303 Medical Asst Lab Procedures 1.....	2
* • 509-304 Medical Asst Clin Procedures 1	4
+ • 509-309 Medical Law, Ethics & Profess	2
Total Credits.....	18

Second Term	Credits
+ * • 501-308 Pharmacology for Allied Health.....	2
* • 509-305 Med Asst Lab Procedures 2.....	2
* • 509-306 Med Asst Clin Procedures 2	3
+ * • 509-307 Med Office Insurance & Finance	2
* • 509-310 Medical Assistant Practicum.....	3
+ * • 801-195 Written Communications	3
Total Credits.....	15

- + *May be offered as distance learning*
- * *Prerequisite required; see course description*
- *A grade of "C" or better is required*

Minimum Program Credits Required - 33

For a complete listing of course descriptions see back of catalog.

509-303 Medical Asst Lab Procedures 1

Introduces medical assistant students to laboratory procedures commonly performed by medical assistants in a medical office setting. Students perform CLIA waived routine laboratory procedures commonly performed in the ambulatory care setting. Students follow laboratory safety requirements and federal regulations while performing specimen collection and processing, microbiology and urinalysis testing. Co-requisite(s): 509-304 Medical Asst Clin Procedures 1. Restricted to students admitted to the following program(s): 31-509-1 Medical Assistant.

509-304 Medical Asst Clin Procedures 1

Introduces medical assistant students to the clinical procedures performed in the medical office setting. Students perform basic examining room skills including screening, vital signs, patient history, minor surgery, and patient preparation for routine and specialty exams in the ambulatory care setting. Prerequisite(s): 509-302 Human Body in Health & Disease (or taken concurrently) and 501-101 Medical Terminology (or taken concurrently). Co-requisite(s): 509-303 Medical Asst Lab Procedures 1. Restricted to students admitted to the following program(s): 31-509-1 Medical Assistant.

509-307 Med Office Insurance & Finance

Introduces medical assistant students to health insurance and finance in the medical office. Students perform bookkeeping procedures, apply managed care guidelines, and complete insurance claim forms. Students use medical coding and managed care terminology to perform insurance-related duties. Prerequisite(s): 103-102 Microsoft Office Suite (or taken concurrently) and 501-101 Medical Terminology and 509-302 Human Body in Health & Disease. Restricted to students admitted to the following program(s): 31-509-1 Medical Assistant.

Notes

Motorcycle, Marine & Outdoor Power Products Technician

Technical Diploma
One Year

Offered in Eau Claire • August entry date

31-461-2

If you enjoy figuring out how things work, repairing engines, and associating with late-breaking technology, you are a good candidate for the Motorcycle, Marine and Outdoor Power Products Technician program.

You'll learn how to efficiently diagnose mechanical, fuel, and electrical problems and make repairs quickly. In addition to classroom activities, you'll learn through hands-on practice in a lab designed to be as much like real-life experience as possible. Throughout the semester, you'll develop the broad skill base employers are looking for through working on inboard and outboard engines as well as engines that power motorcycles, ATVs, snowmobiles, and other recreational vehicles; lawn mowers, chain saws, and more.

Your program includes experience with E-TEC, the technology behind today's energy-efficient, low-emissions two-stroke engines. This new engineering has produced two-stroke engines that meet Environmental Pollution Association (EPA) standards, and the entire industry will be

affected. Your ability to diagnose and repair boat motors, snowmobiles, and other recreational vehicles with E-TEC engineering can give you a competitive edge in the marketplace. There are few training centers nationwide with the facilities and capabilities of CVTC's Motorcycle, Marine and Outdoor Products Technician program.

With just one year of training, you could be well on your way to a career as a motorcycle, marine and outdoor power products technician. This could be the program for you!

Admission Requirements

- COMPASS® pre-entry assessment

Helpful Background

- High school technical education courses
- Basic mathematics
- General science
- Electrical schematics

Career Opportunities

- Marine Technician
- Marine Outboard Mechanic
- Power Products Technician
- Engine Technician
- Power Systems Technician
- Power Sports Technician
- Service Technician
- Motorcycle Technician

2009-10 Employment Facts

Average Hourly Wage \$11.95

Average Monthly Income \$2123.71

Employers

Interstate Auto; Eau Claire, WI
MDMA Equipment (John Deere); Durand, WI
Mega Lube and Oil; Eau Claire, WI
Menards; Eau Claire, WI
Northwest Enterprises; Eau Claire, WI
Precision Innovation; Germantown, WI
TCR Power Products; Neillsville, WI
Team WinnebagoLand; Oshkosh, WI
Universal Marine and RV; Rochester, MN
Walmart Tire & Lube; Menomonie, WI
X Treme Sports; Chippewa Falls, WI



First Term	Credits
442-314A Related Welding, Marine.....	2
* 461-310 Basic Engines/Systems, Intro to.....	5
* 461-312 Engine Theory 1	2
804-360C Math Tech Trades-Auto & Sm Eng	2
Choose 1 course(s) from the following:	
* 461-330 Marine Outboards.....	5
* 461-340 Marine Inboards.....	5
Total Credits.....	16

Second Term	Credits
* 461-313 Engine Theory 2	2
+ 801-351 Applied Communications.....	2
809-351 Occupational Relations	2
Choose 1 course(s) from the following:	
* 461-330 Marine Outboards.....	5
* 461-340 Marine Inboards.....	5
Choose 1 course(s) from the following:	
* 461-320 Snowmobiles & ATVs	5
* 461-360 Motorcycles.....	5
Total Credits.....	16

Third Term	Credits
* 461-314 Engine Theory 3	1
Choose 1 course(s) from the following:	
* 461-320 Snowmobiles & ATVs	5
* 461-360 Motorcycles.....	5
Total Credits.....	6

+ *May be offered as distance learning*

* *Prerequisite required; see course description*

Minimum Program Credits Required - 38

For a complete listing of course descriptions see back of catalog.

461-310 Basic Engines/Systems, Intro to

This course is a prerequisite for all snowmobile/ATV, marine outboard, and marine inboard courses. It includes safety, precision instruments and engine basics, carburetor and EFI theory, service and testing, electrical and ignition theory, and service procedures. Factory certification is obtained on Briggs and Stratton power equipment. This course requires the purchase of approximately \$1,500 in tools and/or equipment. Prerequisite(s): 461-312 Engine Theory 1 (or taken concurrently). Restricted to students admitted to the following program(s): 31-461-2 Motorcycle, Marine & Ou.

461-312 Engine Theory 1

This course will provide the student with basic knowledge of concepts and principles in the design and operation of small engines. Students will study the material corresponding with the type of engine class they are enrolled in. Prerequisite(s): 461-310 Basic Engines/Systems, Intro to (or taken concurrently).

461-313 Engine Theory 2

This course is a continuation of Engine Theory 1. Students will receive instruction that corresponds with the type of engine class they are currently enrolled in. Prerequisite(s): 461-310 Basic Engines/Systems, Intro to (or taken concurrently) and 461-312 Engine Theory 1 (or taken concurrently).

461-314 Engine Theory 3

This course is a continuation of Engine Theory 1 and Engine Theory 2. Students will receive instruction that corresponds with the last type of engine class required to complete the program. Prerequisite(s): 461-310 Basic Engines/Systems, Intro to (or taken concurrently) and 461-312 Engine Theory 1 (or taken concurrently).

Notes

Motorcycle, Marine & Outdoor Power Products Technician

Nursing - Associate Degree

Associate Degree
Two Years

Offered in Eau Claire and River Falls • August and January entry dates

10-543-1

Could you be a registered nurse? The profession needs people with highly developed personal strengths

- Effective communicator
- Able to work in teams
- Critical thinking skills
- Teaching ability
- Desire to help others
- Commitment to health

You'll start as a pre-program nursing student and petition for acceptance to the Nursing-Associate Degree program when you are most ready. Full details of the process and a sample petition form are posted at www.cvtc.edu. Look under "Programs" and select "Nursing-Associate Degree." Information is also available by contacting a Student Support Assistant at 715-833-6505.

When you successfully complete the first year of this program you will have met the academic requirements to take the practical nursing (LPN)

licensure examination.

Employment of registered nurses is expected to grow much faster than the average for all occupations. The best employment opportunities are for those who are willing to relocate. This is a demanding program, and nursing is a demanding profession. But a career in nursing also offers tremendous rewards – and could be the career you've been searching for.

The program is a member of and accredited by the National League for Nursing Accrediting Commission, 3343 Peachtree Road, NE, Suite 500, Atlanta, GA 30326; <http://www.nlnac.org>.

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment with scores of at least 85 in reading and 30 in algebra or ACT with scores of at least 22 in reading and 22 in math
- A COMPASS® writing or ACT English score (for class placement and advisement purposes)
- View the Nursing Petition Process Video
- Follow the petitioning process; see www.cvtc.edu for details

LPNs who wish to enter the Associate Degree program as an advanced placement student will not follow the Petitioning process. Refer to the Nursing-Advanced Placement Nursing program.

Helpful Background

- Strong mathematics and science background
- Strong comprehension, reading, and communication skills
- Strong social and behavioral sciences



Career Opportunities

- Staff Nurse
- Ambulatory Care Nurse
- Charge Nurse
- Home Health Care Nurse
- Private Duty Nurse
- School Nurse
- Clinic Nurse
- Leadership RN
- Occupational Health Nurse
- Public Health Nurse

2009-10 Employment Facts

Average Hourly Wage \$24.72

Average Monthly Income \$3938.19

Employers

Adoray Home, Health, and Hospice; Baldwin, WI
Amery Regional Medical Center; Amery, WI
Baldwin Area Medical Center; Baldwin, WI
Barron Care and Rehab; Barron, WI
Black River Memorial Hospital; Black River Falls, WI
Chetek Nursing Home; Chetek, WI
Chippewa Manor Nursing and Rehab.; Chippewa Falls, WI
Clark County Health Care Center; Owen, WI
Cornell Care Center; Cornell, WI
Heritage of Elmwood; Elmwood, WI
Hudson Hospital; Hudson, WI
Kinnic Long Term Care; River Falls, WI
L.E. Phillips; Chippewa Falls, WI
Lakeview Medical Center; Rice Lake, WI
Luther Hospital; Eau Claire, WI
Marshfield Clinic Urgent Care; Eau Claire, WI
Oakbrook Health and Rehab; Thorp, WI
Sacred Heart Hospital; Eau Claire, WI
Vernon Memorial Hospital; Viroqua, WI

First Term	Credits
+ * • 543-101 Nursing Fundamentals.....	2
* • 543-102 Nursing Skills	3
+ * • 543-103 Nursing Pharmacology	2
* • 543-104 Nsg: Intro Clinical Practice	2
+ * • 801-195 Written Communications	3
* • 806-177 Gen Anatomy & Physiology.....	4
+ * • 809-188 Developmental Psychology.....	3
Total Credits.....	19

Second Term	Credits
+ * • 543-105 Nursing Health Alterations.....	3
+ * • 543-106 Nursing Health Promotion.....	3
* • 543-107 Nsg: Clin Care Across Lifespan	2
* • 543-108 Nsg: Intro Clinical Care Mgt.....	2
* • 806-179 Adv Anatomy & Physiology.....	4
Choose 3 credits from the following:	
+ • 801-196 Oral/Interpersonal Comm	3
+ • 801-198 Speech	3
Total Credits.....	17

Third Term	Credits
+ * • 543-109 Nsg: Complex Health Alterat 1	3
+ * • 543-110 Nsg: Mental Health Comm Con	2
* • 543-111 Nsg: Intermed Clin Practice	3
* • 543-112 Nursing Advanced Skills.....	1
* • 806-197 Microbiology.....	4
Choose 1 course(s) from the following:	
+ * • 809-198 Intro to Psychology	3
+ * • 809-199 Psychology of Human Relations.....	3
Elective.....	3
Total Credits.....	19

Fourth Term	Credits
+ * • 543-113 Nsg: Complex Health Alterat 2	3
+ * • 543-114 Nsg: Mgt & Profess Concepts	2
* • 543-115 Nsg: Adv Clinical Practice	3
* • 543-116 Nursing Clinical Transition	2
+ * • 809-196 Intro to Sociology	3
Elective	2
Total Credits.....	15

- + May be offered as distance learning
- * Prerequisite required; see course description
- A grade of "C" or better is required

Minimum Program Credits Required - 70

For a complete listing of course descriptions see back of catalog.

543-101 Nursing Fundamentals

This course focuses on basic nursing concepts that the beginning nurse will need to provide care to diverse patient populations across the lifespan. Current and historical issues impacting nursing will be explored within the scope of nursing practice. The nursing process will be introduced as a framework for organizing the care of patients with alterations in cognition, elimination, comfort, grief/loss, mobility, integument, and fluid/electrolyte balance. Note: For Online offerings of this course: Online test dates are announced/posted in advance for students. Faculty will list in syllabus how far ahead students may work in an online course. Online courses are NOT self-paced or independent study. Faculty will list in the syllabus use of acceptable proctors. Faculty will NOT leave tests open more than one day unless pre-arranged and agreed upon in advance. Prerequisite(s): 806-177 Gen Anatomy & Physiology (or taken concurrently) or 804-140 Basic Algebra. Restricted to students admitted to the following program(s): 10-543-1 Nursing-Assoc Degree, 31-543-1 Practical Nursing.

543-102 Nursing Skills

This course focuses on development of clinical skills and physical assessment across the lifespan. Content includes mathematic calculations and conversions related to clinical skills, blood pressure assessment, aseptic technique, wound care, oxygen administration, tracheostomy care, suctioning, management of enteral tubes, basic medication administration, glucose testing, enemas, ostomy care, and catheterization. In addition the course includes techniques related to obtaining a health history and basic physical assessment skills using a body systems approach. Prerequisite(s): 543-101 Nursing Fundamentals (or taken concurrently) and 543-103 Nursing Pharmacology (or taken concurrently) and (806-177 Gen Anatomy & Physiology (or taken concurrently) or 806-140 Anatomy & Physiology I). Restricted to students admitted to the following program(s): 10-543-1 Nursing-Assoc Degree, 31-543-1 Practical Nursing.

Notes

Nursing Assistant

Technical Diploma
Less Than One Year

Offered at various locations • August, January and June entry dates

30-543-1

If you're seeking a comparatively short educational program that leads to a career in the health care field, consider the Nursing Assistant program. This program may be a good match for you if you

- Are kind and compassionate.
- Have good communication skills.
- Can work as a team member.
- Are efficient, accurate, and detail oriented.
- Can maintain high professional standards.

As a nursing assistant, you would provide care to a variety of patients to help them live as comfortably and independently as possible. This program will help you learn basic nursing skills:

- Collect data
- Safeguard patients
- Assist in all activities of daily living
- Communicate with patients

The course requires 120 hours of video-based instruction, laboratory, and clinical work. You'll need to have access to a computer with an Internet hookup. This could be in your home, at a nearby library, at one of the CVTC branch campuses, or another location that is convenient for you. Because the instruction is video-based and offered online, you can access the instruction on your own schedule. You'll also work in a laboratory setting on simulated laboratory experiences. During the final portion of your program, you'll work in nursing homes or hospitals and gain actual experience with residents or patients.

When you successfully complete the program, you will be eligible to apply for the National Nurse Aide Assessment Program (NNAAP) Examination. You will need to be certified before you can work in this career area. The demand for certified nursing assistants is expected to increase, especially in nursing homes, community-based residential facilities, and through home health care organizations.

Admission Requirements

- A two-step TB test before beginning the clinical portion of the class
- Wisconsin criminal background check (requires a processing fee)
- At least 16 years old

Helpful Background

- Reading at the 10th grade level or higher
- Good oral communication skills
- Basic math skills

Career Opportunities

- Certified Nursing Assistant (CNA)
- Nursing Assistant
- Personal Care Worker
- Home Health Aide
- Hospice Aide
- Health Technician

2009-10 Employment Facts

Average Hourly Wage \$10.00

Average Monthly Income \$1600.00

Employers

American Lutheran Homes; (several locations in Wisconsin)
Chippewa Manor Nursing & Rehabilitation; Chippewa Falls, WI
Clairemont Nursing & Rehabilitation; Eau Claire, WI
Oakwood Villa; Altoona, WI
Dove Healthcare Nursing & Rehabilitation; Eau Claire, WI
Augusta Area Home; Augusta, WI
Sylverson Lutheran Home; Eau Claire, WI



<u>First Term</u>	<u>Credits</u>
• 543-300 Nursing Assistant	3
Total Credits	3

A grade of "C" or better is required

Minimum Program Credits Required - 3

For a complete listing of course descriptions see back of catalog.

543-300 Nursing Assistant

This 120-hour course is a combination lecture, lab in a classroom and clinical practice conducted in long-term care facilities. It covers basic body function and structure, nutrition, nursing care procedures, and ethical and legal considerations. This course is recognized by the Wisconsin Department of Health Services as a nursing assistant training program. For successful completion you'll need to have access to a computer with an Internet hookup. This could be in your home, at a nearby library, at one of the CVTC branch campuses, or another location that is convenient for you. This course is not eligible for financial aid.

Notes

Nursing Assistant

Offered in Eau Claire • August entry date

10-110-1

Do you see yourself working in a fast-paced law office with attorneys and investigators, serving clients to help meet their legal needs? Then the paralegal profession could be for you.

Working under the supervision of an attorney, paralegals

- Investigate facts of a case.
- Work with clients.
- Use computers to find/organize legal information.
- Review contacts, medical records, and court transcripts.
- Draft documents and prepare them for filing with a court.
- Perform legal research.
- Assist with trial preparation and attend court.

CVTC's Paralegal program is one of a select group of programs in the United States and the only paralegal program in the Chippewa Valley approved by the American Bar Association. CVTC's Paralegal program has been providing quality paralegal instruction in the Chippewa Valley since 1978. Our faculty, attorneys and paralegals, have practical legal experience to guide you along a path of excellence in the law. The

Paralegal program is committed to preparing you for paralegal and legal assistant positions, improving the quality, accessibility, and affordability of legal services.

Graduates work in many professional settings, often drawing on a second area of expertise to specialize in one or more areas of paralegal services:

- Hospitals or personal injury, medical malpractice, or elder law firms
- Immigration law, working with people who do not speak English
- Advertising and marketing industry
- Sports and entertainment agencies or companies
- Patent, copyright, trademark law firms
- Environmental law, working for state/federal government agencies
- Family law legal advocates
- Insurance companies, financial institutions, and real estate firms

If you have graduated with a Bachelor's in Arts or Sciences, you might consider obtaining a Paralegal certificate, which may be completed in one year.

Admission Requirements

- COMPASS® pre-entry assessment
 - 85 on Reading
 - 40 on Writing

Helpful Background

- High school English, four years
- Strong reading skills
- High school accounting
- Computer literacy
- Social studies
- High school math, four years

Career Opportunities

- Paralegal
- Legal Assistant



2009-10 Employment Facts

Average Hourly Wage \$12.99

Average Monthly Income \$2111.13

Employers

Access Security; Chippewa Falls, WI
American Family Insurance; Eau Claire, WI
Anastasia & Associates; Stillwater, MN
Certified Recovery; Eau Claire, WI
Dady and Garner; Minneapolis, MN
Dan Freund Law Office; Eau Claire, WI
Dunn County Circuit Court; Menomonie, WI
Eau Claire County Circuit Court; Eau Claire, WI
Edward Jones; Chippewa Falls, WI
Herrick & Hart, S.C.; Eau Claire, WI
Heywood, Cari and Anderson; Hudson, WI
Ho Chunk Nation Department of Justice; Black River Falls, WI
Joe Goetz Paralegal Service; Eau Claire, WI
Laman and Swenson; Eau Claire, WI
Menards; Eau Claire, WI
Minnesota State Legislature – Revisor's Office; St. Paul, MN
Red Cedar Medical Center-Mayo Health Systems, Legal Department; Menomonie, WI
Royal Credit Union; Eau Claire, WI
Spohrer & Dodd; Jacksonville, FL
St. Croix County Circuit Court; River Falls, WI
Thad Gagner Law Office; Eau Claire, WI
Wiley Law Offices; Eau Claire, WI

First Term		Credits
+	101-105 Accounting, Intro to.....	3
+	110-101 Paralegal & Legal Ethic, Intro.....	3
+	110-102 Civil Litigation I.....	3
+	110-104 Legal Research	3
Choose 1 course(s) from the following:		
+	* 801-136 English Composition 1	3
+	* 801-219 English Composition 1	3
Total Credits.....		15

Second Term		Credits
+	106-141 Computer Applications-Legal	3
+	* 110-103 Civil Litigation II	3
+	* 110-105 Legal Writing	3
+	* 110-106 Family Law	3
+	* 809-195 Economics	3
+	* 809-198 Intro to Psychology	3
Total Credits.....		18

Third Term		Credits
+	* 110-114 Administration of Estates	3
+	* 110-168 Criminal Law-Paralegal	3
Choose 1 course(s) from the following:		
	* 110-147 Immigration Law	3
+	* 110-160 Employment Law	3
+	* 110-180 Elder Law	3
Choose 1 course(s) from the following:		
+	* 110-110 Real Estate Law	3
+	* 110-115 Administrative Law	3
Choose 1 course(s) from the following:		
	* 804-189 Introductory Statistics	3
	* 806-189 Basic Anatomy.....	3
Choose 1 course(s) from the following:		
	* 809-128 Marriage & Family	3
	* 809-159 Abnormal Psychology.....	3
Total Credits.....		18

Fourth Term		Credits
+	* 110-107 Legal Aspects of Bus Organiz.....	3
Choose 1 course(s) from the following:		
+	* 110-122 Debtor and Creditor Relations	3
+	* 110-170 Contract Law	3
Choose 1 course(s) from the following:		
+	* 110-142 Paralegal Internship	3
+	* 110-143 Paralegal Field Study	3
Choose 1 course(s) from the following:		
+	801-196 Oral/Interpersonal Comm	3
+	801-198 Speech	3
Choose 1 course(s) from the following:		
+	* 809-122 Intro to Amer Government	3
+	* 809-197 Contemporary Amer Society	3
Total Credits.....		15

+ May be offered as distance learning
 * Prerequisite required; see course description

Minimum Program Credits Required - 66

Short-Term Training Certificate(s)
 -(TC-110-1) Paralegal Post-Baccalaureate, 24 Credits

For a complete listing of course descriptions see back of catalog.

110-101 Paralegal & Legal Ethic, Intro

An introduction to the legal profession, the courts, legal ethics, legal terminology, research, and the role of paralegals. Restricted to students admitted to the following program(s): TC-110-1 Paralegal Post-Baccalaureate, 10-110-1 Paralegal.

110-168 Criminal Law-Paralegal

Analysis of federal and state laws governing employment relationships. Prerequisite(s): 110-103 Civil Litigation II and (801-136 English Composition 1 or 801-219 English Composition 1) or (Bachelor's Arts Y or Bachelor's Science Y). Restricted to students admitted to the following program(s): 10-110-1 Paralegal, TC-110-1 Paralegal Post-Baccalaureate.

110-147 Immigration Law

This course introduces the student to the basic law and legal concepts involved in the immigration and naturalization process. This includes entry of aliens into the United States and permanent residence based upon an offer of employment or family relationship. Additional areas of law discussed in this course will include problems individuals face with political asylum, deportation and exclusion. Prerequisite(s): 110-102 Civil Litigation I and 110-104 Legal Research and (801-136 English Composition 1 or 801-219 English Composition 1) or (Bachelor's Arts Y or Bachelor's Science Y). Restricted to students admitted to the following program(s): 10-110-1 Paralegal, TC-110-1 Paralegal Post-Baccalaureate.

110-106 Family Law

Basic legal concepts in the area of family relations, including premarital agreements, parental rights, and divorce. Prerequisite(s): 110-102 Civil Litigation I and 110-104 Legal Research and (801-106 English Composition or 801-136 English Composition 1 or 801-219 English Composition 1 or Bachelor's Arts Y or Bachelor's Science Y). Restricted to students admitted to the following program(s): 10-110-1 Paralegal, TC-110-1 Paralegal Post-Baccalaureate.

Notes

Paralegal

Paramedic Technician

Associate Degree
Two Years

Offered in Eau Claire • January entry date

10-531-1

If you're calm in emergencies, are interested in a career in the health field, and have a desire to help others, the Paramedic Technician program could be a good match for you.

As a paramedic, you would provide competent care to people:

- Respond to medical and traumatic emergencies
- Assess ill and injured people
- Initiate care (within your scope of practice)
- Provide for continuity of care
- Take care of patients under direct medical control

You will also provide advanced care, including administering medications, interpreting EKGs, performing endotracheal intubation, and using monitors and other advanced procedures.

Emergency services function 24 hours a day, seven days a week, so you will have irregular working hours. You'll need to be emotionally stable,

have good dexterity and agility, and be able to lift and carry heavy loads.

Upon graduation from the Paramedic Technician program, you are eligible to apply to write the National Registry of EMT's examination and apply to the Wisconsin Department of Health Services for licensure. Your career could take you to a variety of settings, including ambulance services, fire departments, industrial settings, prisons, jails, and hospital emergency departments. Employment opportunities are expected to be good.

This could be the start of a very promising, rewarding career for you!

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

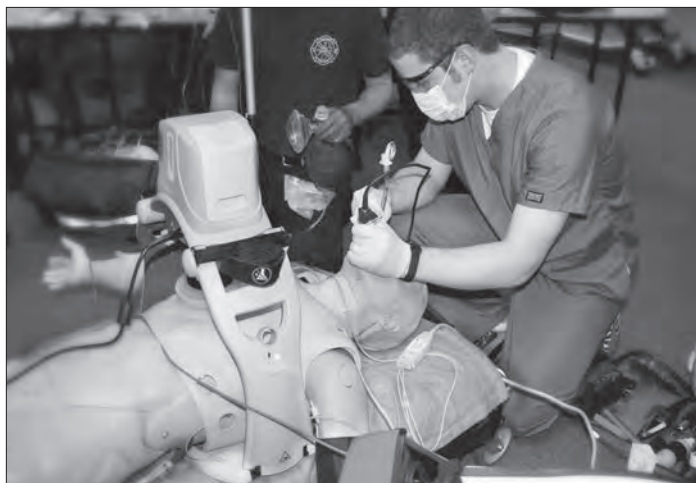
- COMPASS® pre-entry assessment
 - 80 on Reading
 - 45 on Pre-Algebra
- Wisconsin criminal background check (requires a processing fee)
- A pre-entrance health history and physical examination must be on file three weeks before you enter the core courses of the Paramedic Technician program. The Admissions Office will notify you at the appropriate time.

Helpful Background

- Chemistry
- Human biology
- Advanced mathematics

Career Opportunities

- Critical Care Paramedic
- Paramedic



2009-10 Employment Facts

Average Hourly Wage \$18.01

Average Monthly Income \$2964.64

Employers

Allina Medical Transportation; St. Paul, MN
Chippewa Fire Department; Chippewa Falls, WI
Eau Claire Fire Department; Eau Claire, WI
Gold Cross Ambulance; Duluth, MN
Gold Cross Ambulance; St. Cloud, MN
Gold Cross Ambulance; Eau Claire, WI
Green Bay Fire Department; Green Bay, WI
HealthEast Medical Transportation; St. Paul, MN
Menomonie Fire Department; Menomonie, WI
Orange Cross Ambulance; Sheboygan, WI
Oshkosh Fire Department; Oshkosh, WI
Red Wing Fire Department; Red Wing, MN
Tri-State Ambulance; La Crosse, WI
North Memorial Medical Transport; Robbinsdale, MN
Lakeview Medical Center; Rice Lake, WI
Stevens Point Fire Department; Stevens Point, WI
Marshfield Fire Department; Marshfield, WI

First Term	Credits
• 531-110 Basic Emerg Medical Technician	4
* • 531-180 Intro to Adv Prehospital Care	3
+ * • 801-195 Written Communications	3
* • 806-177 Gen Anatomy & Physiology	4
+ * • 809-198 Intro to Psychology	3
Total Credits	17
Second Term	Credits
• 531-151 Paramedic Fundamentals	5
* • 806-179 Adv Anatomy & Physiology	4
Total Credits	9
Third Term	Credits
* • 531-152 Paramedic Pharmacology	4
* • 531-155 Respiratory Management	2
* • 531-156 Cardiology 1	3
* • 531-157 Clinical 1-EMT/Paramedic	4
* • 531-158 Cardiology 2	3
Total Credits	16
Fourth Term	Credits
* • 531-159 Medical Emergencies.....	3
* • 531-164 Trauma	3
* • 531-165 Emergency Care for Specialists.....	3
* • 531-166 EMS Operations.....	3
* • 531-167 Clinical 2-EMT/Paramedic.....	3
Total Credits	15
Fifth Term	Credits
* • 806-197 Microbiology	4
+ * • 809-188 Developmental Psychology	3
Choose 1 course(s) from the following:	
+ * • 801-172 Race Ethnic & Diversity.....	3
+ * • 809-196 Intro to Sociology	3
Choose 1 course(s) from the following:	
+ • 801-196 Oral/Interpersonal Comm	3
+ • 801-198 Speech	3
Total Credits	13

+ May be offered as distance learning
 * Prerequisite required; see course description
 • A grade of "C" or better is required

Minimum Program Credits Required - 70

For a complete listing of course descriptions see back of catalog.

531-151 Paramedic Fundamentals

This preparatory course includes: EMS Systems, Roles and Responsibilities, Well-Being of the Paramedic, Illness and Injury Prevention, Medical-Legal Aspects, Ethics, General Principles, Pathophysiology, Therapeutic Communications, History Taking, Physical Exam Techniques, Patient Assessment, Clinical Decision Making, Verbal Communications, and Documentation. Restricted to students admitted to the following program(s): 10-531-1 Paramedic Technician, 31-531-1 EMT - Paramedic Advanced.

531-152 Paramedic Pharmacology

This course provides the opportunity for the student to develop the knowledge and understanding of basic pharmacodynamics, medication preparation, administration of medication and selected medications used in the treatment of disorders of the major body systems. Prerequisite(s): (531-140 FireMedic Fundamentals (or taken concurrently) or 531-151 Paramedic Fundamentals (or taken concurrently) and 531-155 Respiratory Management (or taken concurrently).

531-155 Respiratory Management

This course provides the student with the knowledge and skills to establish and/or maintain a patent airway, oxygenate, and ventilate a patient. Prerequisite(s): (531-140 FireMedic Fundamentals (or taken concurrently) or 531-151 Paramedic Fundamentals (or taken concurrently) and 531-152 Paramedic Pharmacology (or taken concurrently).

531-156 Cardiology 1

This course will provide the student with the basic knowledge and skills to integrate pathophysiological principles and assessment findings, with ECG interpretation, in order to formulate a field impression and implement the treatment for the patient with cardiovascular disease. Prerequisite(s): (531-140 FireMedic Fundamentals (or taken concurrently) or 531-151 Paramedic Fundamentals (or taken concurrently) and 531-152 Paramedic Pharmacology (or taken concurrently) and 531-155 Respiratory Management (or taken concurrently).

Notes

Paramedic Technician

Offered in Eau Claire • August entry date

31-536-1

The Pharmacy Technician program may be a good match for you if you

- Enjoy working with people.
- Have strong customer service skills.
- Prefer to work as a member of a team.
- Are alert, observant, and organized.
- Can accept responsibility.
- Have strong mathematics, spelling, and reading skills.

Upon graduation, you will be encouraged to take the PTCB National Certification Exam to become certified. Certification is required in some states and generally results in increased pay.

As a pharmacy technician, you'll assist the pharmacist:

- Package and label prescription drugs
- Prepare intravenous mixtures.
- Receive and inventory drug shipments.
- Maintain manual/computer records.

Admission Requirements

- COMPASS® pre-entry assessment, 80 on Reading, 45 on Pre Algebra
- Wisconsin criminal background check (requires a processing fee) showing no drug-related felonies
- Agreement to notify CVTC of any changes in convictions and/or pending charges that occur after completing the Criminal History Record Check form
- A Background Information Disclosure Form providing details of your past and current drug use
- Consent to releasing the results of background checks to clinical sites (pharmacies); must be completed before you are placed at a clinical site
- Consent to drug testing and of releasing of the results to clinical sites. You will be responsible for the cost of the testing.
- Biology – two semesters at high school level or one semester at postsecondary level with grade of “C” or better
- Current CPR-Healthcare Provider or Professional Rescuer certification

- A pre-entrance health history and physical examination must be on file



- Provide office services as needed.
- Compound medications.

All pharmacy technicians are held to high standards. You must

- Comprehend and use medical and drug terminology common to pharmaceutical environments.
- Recognize and apply the knowledge of ethical and legal implications of your actions as it relates to yourselves, the pharmacist, and the pharmacy.
- Be precise and accurate in all your professional actions.

You'll work the same hours as the pharmacists, and that may include evenings, nights, weekends, and holidays. Job prospects are expected to continue to be good. This could be the program and career you're looking for!

three weeks before you enter the core courses of the Pharmacy Technician program. The Admissions Office will notify you at the appropriate time.

Helpful Background

- Strong interpersonal and communication skills
- Ability to work as part of a team
- High school or college biology

Applicants who have been convicted of a drug-related felony will not be admitted to the program. Applicants with other convictions of any kind, including misdemeanors or felonies, may need special approval from a clinical site to be admitted to the program.

You may need to consent to drug testing and release of that information to a clinical site before you will be allowed to begin the clinical experience portion of the program. A positive drug test will exclude you from clinical placement which may result in dismissal from the Pharmacy Technician program.

Career Opportunities

- Pharmacy Technician

2009-10 Employment Facts

Average Hourly Wage \$10.68

Average Monthly Income \$1635.27

Employers

Luther Hospital; Eau Claire, WI

Red Cedar Medical Center; Menomonie, WI

Sacred Heart Hospital; Eau Claire, WI

Walgreens Pharmacy; Rice Lake, WI

Walgreens Pharmacy; Chippewa Falls, WI

First Term	Credits
+ • 501-101 Medical Terminology.....	3
* • 536-110 Pharmaceutical Calculations	3
• 536-112 Pharmacy Business Apps	3
• 536-115 Pharmacy Law	2
• 536-120 Reading Prescriptions, Fund of	2
• 536-134 Pharmacy Benefits-Managing	1
• 536-138 Pharmacy Community Clinical.....	2
Total Credits.....	16

Second Term	Credits
• 536-122 Pharmacology for Pharmacy Tech	2
* • 536-124 Pharmacy Drug Dist. Systems.....	1
• 536-126 Pharmacy Parenteral Admixtures	3
• 536-140 Pharmacy Hospital Clinical.....	2
• 536-141 Hospital Clinical Lab.....	2
+ • 801-196 Oral/Interpersonal Comm	3
+ * • 809-199 Psychology of Human Relations.....	3
Total Credits.....	16

- + *May be offered as distance learning*
- * *Prerequisite required; see course description*
- *A grade of "C" or better is required*

Minimum Program Credits Required - 32

For a complete listing of course descriptions see back of catalog.

536-120 Reading Prescriptions, Fund of

This course prepares the learner to match the brand name and generic name of commonly prescribed medications, determine the pharmacologic classes of commonly prescribed medications, determine the appropriate auxiliary labels to be placed on prescription bottles for commonly prescribed medications, determine if a prescribed medication is a controlled substance and to which schedule it belongs, analyze prescriptions for appropriateness of drug and dosing schedule, and interpret Latin abbreviations used in the practice of pharmacy. Co-requisite(s): 536-110 Pharmaceutical Calculations and 536-112 Pharmacy Business Apps and 536-115 Pharmacy Law and 536-134 Pharmacy Benefits-Managing and 536-138 Pharmacy Community Clinical. Restricted to students admitted to the following program(s): 31-536-1 Pharmacy Technician.

536-115 Pharmacy Law

This course prepares the learner to apply Federal laws to the practice of pharmacy; apply Wisconsin State laws to the practice of pharmacy; select appropriate drug products for substitution in accordance with the law; explain the Investigational New Drug (IND) process; explain pharmacy equipment, license, and floor plan legal requirements; apply controlled substance laws to the procurement, processing, and record keeping of controlled substances; analyze the history of pharmacy law; and summarize drug law enforcement agencies. Co-requisite(s): 536-110 Pharmaceutical Calculations and 536-112 Pharmacy Business Apps and 536-120 Reading Prescriptions, Fund of and 536-134 Pharmacy Benefits-Managing and 536-138 Pharmacy Community Clinical. Restricted to students admitted to the following program(s): 31-536-1 Pharmacy Technician.

Notes

Pharmacy Technician

Physical Therapist Assistant

Associate Degree
Two Years

Offered in Eau Claire • August entry date

10-524-1

If you are dependable, patient, empathetic, able to do some lifting, have good communication skills, and are interested in a career in the health field, the Physical Therapist Assistant program could be for you.

The program prepares you to become a physical therapist assistant in a hospital, nursing home, rehabilitation center, or other health care facility. You would assist the physical therapist

- Implement treatment programs.
- Teach patients to perform exercises.
- Conduct treatments using special equipment.

Physical therapist assistants are employed in physical therapy clinics, nursing care facilities, physicians' offices, general medical and surgical hospitals, and other health care settings. They also work for home health organizations and school systems. The need for physical therapist assistants is projected to grow due to the increased need for support personnel in health care and the shortage of physical therapists. This could be the program you're looking for!

The Physical Therapist Assistant program is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association (1111 North Fairfax St., Alexandria, VA, 22314; Telephone: 703-706-3245; E-mail: accreditation@apta.org; website: www.capteonline.org).

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment
 - 85 on Reading
 - 30 on Algebra
- Wisconsin criminal background check (requires a processing fee)
- Algebra, biology, chemistry – two semesters at high school level or one semester at postsecondary level with grade of "C" or better
- Completion of Basic Nursing Assistant class or proof of Certified Nursing Assistant
- A pre-entrance health history and physical examination must be on file three weeks before you enter the core courses of the Physical Therapist Assistant program. The Admissions Office will notify you at the appropriate time.

Helpful Background

- Strong interpersonal and communication skills
- Entry-level computer skills
- Patient care skills



Career Opportunities

Physical Therapist Assistant

2009-10 Employment Facts

Average Hourly Wage \$17.88

Average Monthly Income \$2943.84

Employers

Eau Claire Therapy and Fitness; Eau Claire, WI
TruRehab of Eau Claire; Eau Claire, WI
Lakeview Medical Center; Bloomer, WI
Midwest Physical Therapy; Bloomer, WI
Oakwood Villa; Eau Claire, WI
PeopleFirst Rehabilitation; (multiple sites in Wisconsin)
Dove Healthcare and Rehabilitation; Eau Claire, WI
Memorial Medical Center; Neillsville, WI
Sacred Heart Hospital - Physical Therapy Department; Eau Claire, WI

First Term	Credits
* • 524-138 PTA Kinesiology 1.....	3
• 524-139 PTA Patient Interventions	4
• 524-140 PTA Professional Issues 1	2
+ * • 801-195 Written Communications	3
* • 806-177 Gen Anatomy & Physiology.....	4
Total Credits.....	16
Second Term	Credits
* • 524-141 PTA Kinesiology 2.....	4
* • 524-142 PTA Therapeutic Exercise.....	3
• 524-143 PTA Therapeutic Modalities	4
+ * • 809-198 Intro to Psychology.....	3
Choose 1 course(s) from the following:	
+ • 801-196 Oral/Interpersonal Comm	3
+ • 801-198 Speech.....	3
Total Credits.....	17
Third Term	Credits
+ * • 809-188 Developmental Psychology.....	3
+ * • 809-196 Intro to Sociology	3
Total Credits.....	6
Fourth Term	Credits
* • 524-144 PTA Princ of Neuro Rehab.....	4
* • 524-145 PTA Princ of Musculo Rehab.....	4
* • 524-146 PTA Cardio & Integ Mgmt.....	3
* • 524-147 PTA Clinical Practice 1	2
Choose 1 course(s) from the following:	
+ * 809-172 Race Ethnic & Diversity.....	3
+ * 809-174 Social Problems	3
Total Credits.....	16
Fifth Term	Credits
* • 524-148 PTA Clinical Practice 2.....	3
* • 524-149 PTA Rehab Across the Lifespan.....	2
* • 524-150 PTA Professional Issues 2	2
* • 524-151 PTA Clinical Practice 3	5
Elective.....	3
Total Credits.....	15

- + *May be offered as distance learning*
- * *Prerequisite required; see course description*
- *A grade of "C" or better is required*

Minimum Program Credits Required - 70

For a complete listing of course descriptions see back of catalog.

524-138 PTA Kinesiology 1

Introduces basic principles of musculoskeletal anatomy, kinematics, and clinical assessment. Students locate and identify muscles, joints, and other landmarks of the lower quadrant in addition to assessing range of motion and strength. Prerequisite(s): 806-177 Gen Anatomy & Physiology (or taken concurrently). Co-requisite(s): 524-139 PTA Patient Interventions and 524-140 PTA Professional Issues 1. Restricted to students admitted to the following program(s): 10-524-1 Physical Therapist Assistant.

524-139 PTA Patient Interventions

An introduction to basic skills and physical therapy interventions performed by the physical therapist assistant. Co-requisite(s): 524-138 PTA Kinesiology 1 and 524-140 PTA Professional Issues 1. Restricted to students admitted to the following program(s): 10-524-1 Physical Therapist Assistant.

524-140 PTA Professional Issues 1

Introduces the history and development of the physical therapy program, legal and ethical issues, the interdisciplinary health care team, and professional communication skills. Co-requisite(s): 524-138 PTA Kinesiology 1 and 524-139 PTA Patient Interventions. Restricted to students admitted to the following program(s): 10-524-1 Physical Therapist Assistant.

524-142 PTA Therapeutic Exercise

Provides instruction on the implementation of a variety of therapeutic exercise principles. Learners implement, educate, adapt, and assess responses to therapeutic exercises. Prerequisite(s): 524-138 PTA Kinesiology 1 (or taken concurrently). Co-requisite(s): 524-141 PTA Kinesiology 2 and 524-143 PTA Therapeutic Modalities.

524-143 PTA Therapeutic Modalities

Develops the knowledge and technical skills necessary to perform numerous therapeutic modalities likely to be utilized as a PTA. Co-requisite(s): 524-141 PTA Kinesiology 2 and 524-142 PTA Therapeutic Exercise.

Notes

Physical Therapist Assistant

Offered in Eau Claire • August entry date

10-526-1

The Radiography program may be a good match for you if you are

- Efficient and accurate with an eye for detail.
- Able to follow physicians' orders.
- Compassionate.
- Seeking a career helping others.
- Physically able to meet the demands of the profession.
- Good at science and math.

As a radiologic technologist, you will work with patients to produce radiographs that aid in the diagnosis of diseases. You will prepare patients for the exam, position them for the radiograph, and follow all regulations to protect yourself, your patients, and your co-workers from unnecessary exposure. This is a physically demanding career; you're on your feet for long periods and must be able to lift or turn patients and move equipment.

You'll learn through classroom, laboratory, and clinical education experiences. You'll work with patients as part of your training.

When you graduate, you are eligible to write the ARRT national registry examination to become an RT(R), Registered Technologist (Radiography). The Radiography program is accredited by the Joint Review Committee on Education in Radiologic Technology, 20N Wacker Drive, Suite 2840, Chicago, IL 60606-2901; phone 312-704-5300; fax 312-704-5304; e-mail mail @jrcert.org; website www.jrcert.org.

Employment prospects are good for registered technologists. Radiologic technologists willing to relocate and who are experienced in more than one imaging modality (x-ray, CT, MRI) procedure have the best employment opportunities.

The Radiography program could be your first step toward a rewarding career!

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment, 85 on Reading, 30 on Algebra, 45 on Pre-Algebra
- Wisconsin criminal background check (requires a processing fee)
- Algebra, chemistry, – two semesters at high school level or one semester at postsecondary level with grade of "C" or better
- Current CPR-Healthcare Provider or Professional Rescuer certification
- Completion of CVTC Basic Nursing Assistant class
- A pre-entrance health history and physical examination must be on file three weeks before you enter the core courses of the Radiography program. The Admissions Office will notify you at the appropriate time.
- Sufficient visual, communication, and motor skills and satisfactory intellectual and emotional functions to perform to the high standards maintained in this career. A detailed list is available with the Radiography program information at www.cvtc.edu or through a program counselor.

Helpful Background

- Advanced algebra and geometry
- Advanced science, physics, chemistry



- Anatomy
- Computer skills
- Interpersonal communications

Pregnancy during sequence may delay graduation date.

This program requires a clinical experience, and facilities are located throughout western Wisconsin. An eight-week summer session is required the first year in this program. An 8-week internship is required the second summer of this program. Relocation may be necessary for the internship period.

Career Opportunities

- Radiologic Technologist (Radiographer)
- Mammography Technologist
- Magnetic Resonance Technologist
- Radiography Information System Technologist

2009-10 Employment Facts

Average Hourly Wage \$20.01

Average Monthly Income \$3326.70

Employers

Abbot Northwestern; Minneapolis, MN
Amery Hospital; Amery, WI
Aspirus Hospital; Wausau, WI
Cumberland Memorial Hospital; Cumberland, WI
Gillette Children's Services Center; St. Paul, MN
Gundersen Lutheran; La Crosse, WI
Hayward Area Medical Hospital; Hayward, WI
Hudson Hospital; Hudson, WI
Lakeview Medical Center; Rice Lake, WI
Luther Hospital; Eau Claire, WI
Reedsburg Area Medical Center; Reedsburg, WI
Sacred Heart Hospital; Eau Claire, WI
UW Hospital; Madison, WI
Graduates have the best employment opportunities if they are willing to relocate.

First Term		Credits
* • 526-149	Radiographic Procedures 1.....	5
• 526-158	Introduction to Radiography	3
• 526-159	Radiographic Imaging 1	3
* • 526-168	Radiography Clinical 1	2
* • 806-177	Gen Anatomy & Physiology	4
Total Credits.....		17
Second Term		Credits
* • 526-170	Radiographic Imaging 2	3
* • 526-191	Radiographic Procedures 2.....	5
* • 526-192	Radiographic Clinical 2.....	3
• 804-107	College Mathematics	3
Choose 1 course(s) from the following:		
+ * • 809-172	Race Ethnic & Diversity	3
+ * • 809-195	Economics.....	3
+ * • 809-197	Contemporary American Society.....	3
Total Credits.....		17
Third Term		Credits
* • 526-193	Radiographic Clinical 3.....	3
+ * • 809-198	Intro to Psychology	3
Total Credits.....		6
Fourth Term		Credits
* • 526-194	Imaging Equipment Operations	3
* • 526-195	Radiographic Quality Analysis	2
+ • 526-196	Modalities	3
* • 526-199	Radiographic Clinical 4.....	3
+ * • 801-195	Written Communications	3
Total Credits.....		14
Fifth Term		Credits
+ * • 526-189	Radiographic Pathology	1
* • 526-190	Radiography Clinical 5.....	2
* • 526-197	Radiation Protection & Biology	3
+ • 801-196	Oral/Interpersonal Comm	3
+ * • 809-196	Intro to Sociology	3
Total Credits.....		12
Sixth Term		Credits
526-174	ARRT Certification Seminar.....	2
* • 526-198	Radiography Clinical Practice 6.....	2
Total Credits.....		4

- + *May be offered as distance learning*
- * *Prerequisite required; see course description*
- *A grade of "C" or better is required*

Minimum Program Credits Required - 70

For a complete listing of course descriptions see back of catalog.

526-149 Radiographic Procedures 1

Prepares radiography students to perform routine radiologic procedures on various parts of the body including the upper body, hip, pelvis, and ankle. Students apply knowledge of human anatomy to position the patient correctly to achieve the desired result. Prerequisite(s): 806-177 Gen Anatomy & Physiology (or taken concurrently). Restricted to students admitted to the following program(s): 10-526-1 Radiography.

526-158 Introduction to Radiography

Introduces students to the role of radiography in health care. Students apply medical terminology, legal and ethical considerations to patient care and pharmacology in the radiologic sciences. Restricted to students admitted to the following program(s): 10-526-1 Radiography.

526-159 Radiographic Imaging 1

Introduces radiography students to the process and components of analog imaging. Students determine the factors that affect image quality including contrast, density, detail, and distortion. Restricted to students admitted to the following program(s): 10-526-1 Radiography.

526-168 Radiography Clinical 1

This beginning level clinical course prepares radiography students to perform radiologic procedures on patients with extensive supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. An emphasis of the course is the development of communication and critical thinking skills appropriate to the clinical setting. Prerequisite(s): 806-177 Gen Anatomy & Physiology (or taken concurrently). Co-requisite(s): 526-149 Radiographic Procedures 1 and 526-158 Introduction to Radiography and 526-159 Radiographic Imaging 1. Restricted to students admitted to the following program(s): 10-526-1 Radiography.

Notes

Offered in Eau Claire • August entry date

31-517-1

If this is how you describe yourself, you might be a good candidate for the Renal Dialysis Technician program:

- Seeking a career in the health field
- Compassionate
- Good “people” skills
- Good technical skills
- Accurate, alert, and organized
- Able to work on your feet for long hours
- Enjoy working as part of a team
- Able to adhere to high standards of patient care

As a renal dialysis technician, you will operate machines used for hemodialysis, a process that cleanses the blood of people with chronic kidney disease. You will provide patient care under the supervision of a registered nurse. Your specific job responsibilities also would include

- Troubleshooting and basic maintenance of dialysis machines.
- Observing and monitoring patients on dialysis.

- Performing venipuncture of dialysis access.
- Assisting in maintaining a safe and clean environment.
- Collaborating with the registered nurse for patient care.

This program provides you with specific technical knowledge and skills and an understanding of principles and concepts related to chronic kidney disease and the dialysis process. It is certified by The Board of Nephrology Examiners Nursing and Technology, Inc. (BONENT). Dialysis patient care technicians are required by the Centers of Medicare and Medicaid (CMS) to become certified with 18 months of working in a dialysis unit.

The number of people relying on dialysis is increasing about 3 percent a year. The medical field needs competent, trained renal dialysis technicians. Employment opportunities are available throughout the U.S. This could be the start of a very rewarding career for you!

Admission Requirements

- COMPASS® pre-entry assessment, 80 on Reading, 45 on Pre-Algebra
- Wisconsin criminal background check (requires a processing fee)
- Biology-two semesters at high school level or one semester at postsecondary level with grade of “C” or better
- Current CPR-Health Care Provider or Professional Rescuer certification
- A pre-entrance health history and physical examination must be on file three weeks before you enter the core courses of the Renal Dialysis Technician program. The Admissions Office will notify you at the appropriate time.

Helpful Background

- Biology
- Computer technology
- Interpersonal communications
- Critical thinking skills

Career Opportunities

- Renal Dialysis Technician
- Patient Care Technician

2009-10 Employment Facts

Average Hourly Wage \$12.70

Average Monthly Income \$2201.16

Employers

Davita Health Care; Arden Hills, MN
Gunderson Lutheran; La Crosse, WI
Luther Midelfort; Eau Claire, WI
Ministry Health Care; Marshfield, WI
Sacred Heart Hospital; Eau Claire, WI



First Term	Credits
+ • 501-101 Medical Terminology.....	3
* • 517-320 Intro to Renal Dialysis.....	3
* • 517-321 Principles of Renal Dialysis I.....	4
Choose 1 course(s) from the following:	
+ * 809-198 Intro to Psychology.....	3
+ * 809-199 Psychology of Human Relations.....	3
Choose 2 credits from the following:	
+ 801-196 Oral/Interpersonal Comm.....	3
+ 801-351 Applied Communications.....	2
Total Credits.....	15

Second Term	Credits
* • 517-302 Renal Failure & Support Ther.....	3
* • 517-304 Hemodialysis Lab Procedures.....	1
* • 517-322 Principles of Renal Dialysis 2.....	3
* • 517-323 Clinical Practicum 1.....	2
* • 517-324 Clinical Practicum 2.....	3
Total Credits.....	12

- + *May be offered as distance learning*
- * *Prerequisite required; see course description*
- *A grade of "C" or better is required*

Minimum Program Credits Required - 27

For a complete listing of course descriptions see back of catalog.

501-101 Medical Terminology

This course focuses on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms. Emphasis on spelling, definition, and pronunciation. Introduction to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

517-302 Renal Failure & Support Ther

This course explores the pathological changes and/or conditions of the renal system and the effects of these changes on the dialysis patient. Prerequisite(s): 517-321 Principles of Renal Dialysis I. Co-requisite(s): 517-304 Hemodialysis Lab Procedures and 517-322 Principles of Renal Dialysis 2 and 517-323 Clinical Practicum 1 and 517-324 Clinical Practicum 2.

517-304 Hemodialysis Lab Procedures

This laboratory course provides the student with hands-on experience in learning the technical skills required to function as a Renal Dialysis Technician. Prerequisite(s): 517-321 Principles of Renal Dialysis I. Co-requisite(s): 517-302 Renal Failure & Support Ther and 517-322 Principles of Renal Dialysis 2 and 517-323 Clinical Practicum 1 and 517-324 Clinical Practicum 2.

517-320 Intro to Renal Dialysis

This course introduces the student to health care concepts, basic patient care skills, infection control procedures, chronic illness and the grieving process, stress management, and related interpersonal skills. Prerequisite(s): 501-101 Medical Terminology (or taken concurrently) and (801-196 Oral/Interpersonal Comm (or taken concurrently) or 801-351 Applied Communications (or taken concurrently) and (809-198 Intro to Psychology (or taken concurrently) or 809-199 Psychology of Human Relations (or taken concurrently)). Co-equisite(s): 517-321 Principles of Renal Dialysis I. Restricted to students admitted to the following program(s): 31-517-1 Renal Dialysis Technician.

Notes

Renal Dialysis Technician

Offered in Eau Claire and River Falls • August entry date

31-475-3

The Residential Construction program can help you prepare for a variety of careers in the home building industry. This field needs people with physical abilities and good analytical skills:

- Excellent manual dexterity
- Good eye-hand coordination
- Good sense of balance
- Good business sense and math skills
- Well-developed organizational skills
- Good attention to detail

During your first semester you'll learn the basics of the residential construction industry:

- Construction safety
- Construction concepts
- Blueprint reading
- Materials and fasteners
- Rough framing
- Stair systems
- Roof framing
- Roofing

The second semester of instruction builds on that background:

- Estimating (residential)
- Construction planning
- Sustainability
- Doors and windows
- Energy Conservation
- Exterior finish/Interior finish
- Cabinet installation
- Energy Conservation

You'll also receive instruction in incorporating "green" technologies and materials in construction projects, and Wisconsin Energy Star specifications. This program includes plenty of hands-on experience. The main lab project will be to help construct a full-scale, high-quality home on an actual job site under the close supervision of an experienced instructor.

The construction industry fluctuates with the strength of the economy, but the employment outlook for skilled people with training is expected to be good. You have options!

Admission Requirements

- COMPASS® pre-entry assessment

Helpful Background

- Mathematics
- Science
- Industrial technology courses

Career Opportunities

- Carpenter (General)
- Carpenter (Foreman)
- Carpenter (Interior Finish)
- Carpenter (Exterior Finish)
- Carpenter (Rough)
- Carpenter (Remodeling)
- Lumberyard Laborer
- Lumberyard Salesperson
- Construction (Job Coordinator)

2009-10 Employment Facts

Average Hourly Wage \$13.08

Average Monthly Income \$2304.75

Employers

Brunkow Builders Inc.; Eau Claire, WI

Eau Claire Business Interior; Eau Claire, WI

Indianhead Glass; St. Croix, WI

Lindus Construction; Baldwin, WI

Menards DC; Eau Claire, WI

Pete Anderson; River Falls, WI

Premiere Properties; Shakopee, MN

Ross and Associates; River Falls, WI

University of Wisconsin-Eau Claire Carpenter Shop; Eau Claire, WI



First Term		Credits
	475-100 Construction Safety	1
*	475-110 Framing Methods/Bldg the Envelope	4
*	475-111 Framing Methods/Bldg the Envelope Lab	5
*	475-112 Const Basics & Print Reading	2
*	475-115 Roof Systems and Stairs	3
	806-112 Principles of Sustainability	3
Total Credits		18

Second Term		Credits
*	475-120 Finish Carpentry Int/Ext	4
	475-121 Finish Carpentry Int/Ext Lab	5
*	475-124 Construction Planning	2
*	475-125 Est Residential Construction	2
+	809-199 Psychology of Human Relations	3
Total Credits		16

+ May be offered as distance learning

* Prerequisite required; see course description

Minimum Program Credits Required - 34

For a complete listing of course descriptions see back of catalog.

475-125 Estimating Residential Const.

This course introduces the student to the basic methods of estimating light building construction and develops a system for doing quantity take off of materials. The student should develop skills to complete carpentry materials and labor. Material board feet, square feet and lineal foot pricing will be taught. At the conclusion of this course, the student should have developed the skills to complete preliminary material and labor estimates for residential construction. Prerequisite(s): 475-100 Construction Safety and 475-110 Framing Methods/Bldg the Envelope and 475-111 Framing Methods/Bldg the Envelope Lab and 475-112 Const Basics & Print Reading and 475-115 Roof Systems and Stairs.

475-112 Const Basics & Print Reading

During this course you will start with basic construction language, symbols, and print reading fundamentals. The main emphasis of this course will be to prepare the students to function at the job site when reading and interpreting construction drawings and framing plans. Proper use of the architects scales and their uses will be taught. Applied math skills used in the construction industry will be covered as well. Prerequisite(s): 475-100 Construction Safety (or taken concurrently). Co-requisite(s): 475-110 Framing Methods/Bldg the Envelope and 475-111 Framing Methods/Bldg the Envelope Lab and 475-115 Roof Systems and Stairs. Restricted to students admitted to the following program(s): 31-475-3 Residential Construction.

806-112 Principles of Sustainability

Prepares the student to develop sustainable literacy, analyze the interconnections among the physical and biological sciences and environmental systems, summarize the effects of sustainability on health and well-being, analyze connections among social, economic, and environmental systems, employ energy conservation strategies to reduce the use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal and recycling in the U.S., and analyze approaches used by your community to promote and implement sustainability.

Notes

Respiratory Therapist

Associate Degree
Two Years

Offered in Eau Claire • August entry date

10-515-1

The Respiratory Therapist program could be a good match for you if you are

- Interested in a health field career and eager to be part of a health care team.
- A compassionate person who wants to help others.
- Able to communicate effectively and with sensitivity when needed.
- Willing and able to meet the high standards and ethics of all health care professionals.

At graduation, you will be qualified for admission to entry-level (Certified Respiratory Therapist – CRT – which is required to obtain a license to practice) and advanced practitioner examinations to become a registered respiratory therapist (RRT). As a respiratory therapist, you will be part of a team evaluating, treating, and managing patients with respiratory illnesses and other cardiopulmonary disorders. You'll also be involved in clinical decision making and patient education.

You'll have a wide range of responsibilities:

- Assess the cardiopulmonary status of patients
- Draw blood samples
- Perform blood gas analysis
- Perform pulmonary function testing
- Initiate ordered respiratory care
- Evaluate and monitor patient responses to care
- Provide patient, family, and community education
- Participate in life support activities as required

Faster-than-average employment growth is projected for this career field. This program offers you rewarding career opportunities!

This program is accredited by the Commission on Accreditation of Allied Health Education Programs, on recommendation of the Committee on Accreditation for Respiratory Care (CoARC) <http://coarc.com>.

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment, 85 on Reading, 30 on Algebra
- Wisconsin criminal background check (requires a processing fee)
- Algebra, Chemistry, Biology-two semesters at high school level or one semester at postsecondary level with grade of "C" or better
- A pre-entrance health history and physical examination must be on file three weeks before you enter the core courses of the Respiratory Therapist program. The Admissions Office will notify you at the appropriate time.

Helpful Background

- Math and science
- Good reading skills
- Strong interpersonal skills

This is an intense program demanding a strong commitment to success. It is recommended that you limit your outside employment to 16 hours a

week or less to allow yourself enough time to study and complete assignments.

You will need to travel to clinical sites, within a 2 hour radius of the Eau Claire campus, which may require an overnight stay. Travel and lodging costs will be your responsibility.

Career Opportunities

- Respiratory Care Practitioner
- Respiratory Care Therapist
- Pulmonary Function Technologist

2009-10 Employment Facts

Average Hourly Wage \$23.71

Average Monthly Income \$3629.36

Employers

Children's Hospital; Minneapolis, MN
Grace Home Respiratory; Altoona, WI
Luther Hospital; Eau Claire, WI
Mayo Clinic; Rochester, MN
Midelfort Pharmacy and Home Medical; Eau Claire, WI
Ministry Health Care HYMC; Woodruff, WI
Sacred Heart Hospital; Eau Claire, WI
University of Minnesota Fairview Medical Center; Minneapolis, MN
Foedtert Hospital; Milwaukee, WI
Barron Medical Center; Barron, WI
Wissota Health and Regional Vent Center; Chippewa Falls, WI



First Term	Credits
+ • 501-101 Medical Terminology.....	3
• 515-111 Respiratory Survey.....	3
* • 515-171 Respiratory Therapeutics 1.....	3
+ • 801-196 Oral/Interpersonal Comm.....	3
* • 806-177 Gen Anatomy & Physiology.....	4
Total Credits.....	16
Second Term	Credits
* • 515-172 Respiratory Therapeutics 2.....	3
* • 515-173 Respiratory Pharmacology.....	3
* • 515-174 Respiratory & Circulatory Phys.....	3
* • 515-176 Respiratory Disease.....	3
+ * • 809-198 Intro to Psychology.....	3
Total Credits.....	15
Third Term	Credits
* • 515-175 Respiratory Clinical 1.....	2
* • 806-197 Microbiology.....	4
Total Credits.....	6
Fourth Term	Credits
* • 515-112 Respiratory Airway Management.....	2
* • 515-113 Respiratory Life Support.....	3
* • 515-178 Respiratory Clinical 2.....	3
* • 515-179 Respiratory Clinical 3.....	3
* • 515-180 Resp Neo/Peds Care.....	2
+ * • 809-195 Economics.....	3
Total Credits.....	16
Fifth Term	Credits
* • 515-145 Adv Respiratory Care Topics.....	2
* • 515-181 Resp & Circ Diagnostics & Moni.....	3
* • 515-182 Respiratory Therapy Clin Prac 4.....	3
* • 515-183 Respiratory Therapy Clin Prac 5.....	3
+ * • 801-195 Written Communications.....	3
+ * • 809-196 Intro to Sociology.....	3
Total Credits.....	17

- + *May be offered as distance learning*
- * *Prerequisite required; see course description*
- *A grade of "C" or better is required*

Minimum Program Credits Required - 70

For a complete listing of course descriptions see back of catalog.

501-101 Medical Terminology

This course focuses on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms. Emphasis on spelling, definition, and pronunciation. Introduction to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

515-111 Respiratory Survey

This course will introduce the student to issues facing health care workers. Topics will include ethics, confidentiality, and professionalism. Health care structure and economics will also be introduced. Other topics may include professional licensure, legal aspects of health care, and patient communication. Restricted to students admitted to the following program(s): 10-515-1 Respiratory Therapist.

515-171 Respiratory Therapeutics 1

Introduces the topics of medical gas administration and humidity and aerosol therapy. The learner will apply physics, math, and patient assessment concepts to oxygen, aerosol and humidity therapy. Prerequisite(s): 515-111 Respiratory Survey (or taken concurrently) or 515-170 Respiratory Therapy Survey (or taken concurrently) and 806-177 Gen Anatomy & Physiology (or taken concurrently). Restricted to students admitted to the following program(s): 10-515-1 Respiratory Therapist.

515-173 Respiratory Pharmacology

Examines basic pharmacology principles, drug dosage, and calculations. Medications for inhalation including mucolytics, bronchodilators, and anti-inflammatories. Also includes cardiac drugs, anesthetic drugs, neuromuscular blockers, and antimicrobials. Prerequisite(s): 806-177 Gen Anatomy & Physiology and (515-170 Respiratory Therapy Survey or 515-111 Respiratory Survey).

Notes

Respiratory Therapist

Offered in Eau Claire • June entry date

31-512-1

If you'd like to be part of a surgical team in an operating room, the Surgical Technologist program could be for you. This career area needs professionals who are

- Able to maintain the fast pace of the environment.
- Willing and able to report for duty when on call.
- Physically able to transfer patients.
- Able to work standing for long periods of time.
- Able to maintain confidentiality.
- Able to respond quickly and accurately in times of stress.

You will be a part of a surgical team before, during, and after procedures:

- Gather supplies and equipment
- Open sterile supplies
- Scrub, gown, and glove before procedures
- Organize sterile supplies and equipment
- Assist surgeon and assistant don gown and gloves
- Assist with draping the patient

- Pass instruments and assist with procedures
- Clean up OR suite and transfer patients

The Surgical Technologist program includes classroom and clinical practice. Clinical sites include facilities in Eau Claire and Chippewa Falls. You may be required to relocate during your four-week internship experience.

Job opportunities are best for technologists who are certified. When you complete this program, you will be awarded a diploma as a Surgical Technologist and will take the national Surgical Technologist Certification examination. This could be the program you need to begin a truly rewarding career!

The Surgical Technologist program is a member of and accredited by the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting, 6W, Dry Creek Circle, Suite No. 110, Littleton, CO 80120; phone 303-741-3655; website www.arcs.org.

Admission Requirements

- COMPASS® pre-entry assessment
 - 80 on Reading
 - 45 on Pre-algebra
- Wisconsin criminal background check (requires a processing fee)
- Biology, chemistry – two semesters at high school level or one semester at postsecondary level with grade of “C” or better
- Current CPR-Healthcare Provider or Professional Rescuer certification
- A pre-entrance health history and physical examination must be on file three weeks before you enter the core courses of the Surgical Technologist program. The Admissions Office will notify you at the appropriate time.

Helpful Background

- Ability to work as part of a team
- Excellent oral and written communication skills
- Prior health care experience



- Prior health care training (example: Central Service Technician program)
- Possess manual dexterity and fine motor coordination

This program is physically demanding. For a list of physical requirements, call a program counselor.

Career Opportunities

- Certified Surgical Technologist (CST)
- Ambulatory Surgery Aide/Technician
- Diagnostic Procedures Scrub Technologist
- Podiatric Assistant
- Gastroenterology Technologist
- Private Scrub Technologist
- Veterinary Surgical Assistant
- Anesthesia Technician
- Cardiac Cath Lab Surgical Technologist
- Central Sterilization Technician
- Obstetrical Technician

2009-10 Employment Facts

Average Hourly Wage \$16.77
Average Monthly Income \$2907.15

Employers

Lakeview Hospital; Rice Lake, WI
Luther Midelfort Northland; Barron, WI
Luther Hospital; Eau Claire, WI
Madison Surgery Center; Madison, WI
Red Cedar Medical Center; Menomonie, WI
Sacred Heart Hospital; Eau Claire, WI
St. John's Hospital; Maplewood, MN
St. Joseph's Hospital; Chippewa Falls, WI

First Term	Credits
+ • 501-101 Medical Terminology.....	3
* • 806-177 Gen Anatomy & Physiology.....	4
Total Credits.....	7

Second Term	Credits
* • 512-327 ST: Introduction.....	4
* • 512-328 ST: Fundamentals 1.....	4
* • 512-330 ST: Clinical 1.....	3
• 512-331A Surgical Procedures A.....	2
+ • 801-351 Applied Communications.....	2
Total Credits.....	15

Third Term	Credits
* • 512-329 ST: Fundamentals 2.....	2
* • 512-331B Surgical Procedures B.....	2
* • 512-332 ST: Clinical 2.....	4
* • 512-334 ST: Clinical 3.....	4
• 806-301 Basic Microbiology.....	2
Total Credits.....	14

- + *May be offered as distance learning*
- * *Prerequisite required; see course description*
- *A grade of "C" or better is required*

Minimum Program Credits Required - 36

For a complete listing of course descriptions see back of catalog.

501-101 Medical Terminology

This course focuses on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms. Emphasis on spelling, definition, and pronunciation. Introduction to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

512-327 ST: Introduction

Provides the foundational knowledge of disinfection, sterilization, infection control, and asepsis. Legal and ethical issues encountered in the healthcare environment are explored. Simulated laboratory practice enables the learner to develop beginning technical skills. Prerequisite(s): (806-177 Gen Anatomy & Physiology or 806-140 Anatomy & Physiology I) and (501-101 Medical Terminology or 530-153 Medical Terminology I). Co-requisite(s): 512-328 ST: Fundamentals 1 and 512-330 ST: Clinical 1. Restricted to students admitted to the following program(s): 31-512-1 Surgical Technologist.

512-328 ST: Fundamentals 1

Includes the basic clinical skills needed by the Surgical Technologist in the scrub role. Learners develop skills in identifying basic instrumentation, supplies, drains, catheters, dressings, and sponges. Includes practice experience in creating a sterile field, draping, passing instruments and supplies, performing counts, and preparing supplies. Prerequisite(s): (806-177 Gen Anatomy & Physiology or 806-140 Anatomy & Physiology I) and (501-101 Medical Terminology (or taken concurrently) or 530-153 Medical Terminology I (or taken concurrently)). Co-requisite(s): 512-327 ST: Introduction and 512-330 ST: Clinical 1. Restricted to students admitted to the following program(s): 31-512-1 Surgical Technologist.

Notes

Offered in Eau Claire

10-499-5

If you've completed an apprenticeship program in Wisconsin, the Technical Studies - Journeyworker program can lead to an associate degree designed around your individual needs.

This program could be a good match for you if you're seeking career advancement in your professional field. You design your own program so you can meet your educational goals. You may be eligible for advanced standing based on training you've already completed.

If you completed your apprenticeship program outside of Wisconsin, you may still be eligible for the Technical Studies - Journeyworker program.

Past graduates have created programs that helped them gain supervisory and management roles in their chosen career area. The Technical Studies - Journeyworker program may be just what you need to help you take your career to the next level.

For information on where this program may transfer to a four-year college see page 207.

Admission Requirements

- COMPASS® pre-entry assessment
- Submit a copy of Wisconsin Journey level Certificate to the Admissions Office at CVTC.
- Meet with the appropriate Program Counselor to begin developing your Associate Degree Technical Studies - Journeyworker Program Planner. Call the Counseling Center at 715-833-6346 to schedule an appointment.
- Your Program Plan must be submitted to and approved by the Individualized Technical Studies Committee.
- Documented approval of Individualized Program Plan will be submitted to the Admissions Office by the Individualized Technical Studies Committee

Helpful Background

- Ability to write at college level for class reports
- Basic math skills
- Oral and interpersonal communication skills
- Willingness to learn

2009-10 Employment Facts

Average Hourly Wage \$30.00

Average Monthly Income \$5199.60

Employers

Chippewa Valley Technical College; Eau Claire, WI



First Term	Credits
WI Journey Certificate-400 hrs.....	39
Total Credits.....	39

Second Term	Credits
Choose 1 course(s) from the following:	
804-107 College Mathematics	3
+ * 804-123 Math w Business Apps	3
+ * 804-133 Math & Logic	3
Elective	3
Total Credits.....	6

Third Term	Credits
Choose 1 course(s) from the following:	
+ * 809-195 Economics.....	3
+ * 809-196 Intro to Sociology	3
+ * 809-197 Contemporary American Society	3
Choose 1 Course(s) from the following:	
+ * 809-198 Intro to Psychology	3
+ * 809-199 Psychology of Human Relations.....	3
Total Credits.....	6

Fourth Term	Credits
Choose 6 credits from the following:	
+ * 801-195 Written Communications	3
+ 801-196 Oral/Interpersonal Comm	3
+ * 801-197 Technical Reporting	3
+ 801-198 Speech	3
Choose 3 credits from the following:	
+ * 809-195 Economics	3
+ * 809-196 Intro to Sociology	3
+ * 809-197 Contemporary American Society	3
+ * 809-198 Intro to Psychology	3
+ * 809-199 Psychology of Human Relations	3
Total Credits.....	9

+ *May be offered as distance learning*
 * *Prerequisite required; see course description*

Minimum Program Credits Required - 60

For a complete listing of course descriptions see back of catalog.

809-195 Economics

Designed to give an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues. Prerequisite(s): (COMPASS-Reading 70 or ACT Reading preentry assmt 16) or 808-110 College Reading or (Assoc Degree preentry assmt Y or Bachelor's Arts Y or Bachelor's Science Y).

801-196 Oral/Interpersonal Comm

Focuses upon developing speaking, verbal and nonverbal communication, and listening skills through individual presentations, group activities, and other projects.

801-198 Speech

Explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course.

Notes

Offered in Eau Claire. This program accepts new students on a year-round basis. The daytime program is eight (8) weeks in length and begins every August, October, and March.

30-458-1

The trucking industry needs trained professionals with the skills and personal characteristics to get the job done:

- Independent, but able to follow regulations
- Excellent driving skills
- Responsible; concerned for safety
- Able to follow directions

If that's how you'd describe yourself, the Truck Driving program could be the training you've been looking for. Your course will provide you with the knowledge you need to begin your truck driving career:

- Federal and state regulations
- How to maintain the driver's logbook
- Safe operating procedures
- Loading and securing loads
- Engines, transmissions, and differentials
- Map-reading
- Handling related tools and equipment
- Bills of lading, hazardous materials

Through hands-on experiences, you'll receive training patterned after the day-to-day demands of this career:

- Shifting 9-, 10-, and 13-speed transmissions
- Conducting the pre-trip inspection
- Coupling and uncoupling
- Backing maneuvers
- Operating tractors and 48-/53-foot trailers
- Operating a forklift

You may also gain training to give you a competitive edge in your career, including a Class "A" Commercial Driver's License with air brakes; hazardous materials, doubles/triples, and tanker endorsements; and advanced training in off-road recovery, evasive maneuvers, controlled braking, and skid control.

This program could be what you need to begin a rewarding career!

Admission Requirements

- Applicants without a high school diploma or GED®/HSED must take the COMPASS® reading assessment and score a minimum of 62
- Verification of Valid Driver's (Operator's) License and Controlled Substance Testing form must be submitted
- Required Information Session (RIS)
- Age 18 or older
- You must have a current DOT physical and negative drug test on file with CVTC before you will be allowed to operate school vehicles.

Note: Driving record and criminal history will impact your employment opportunities.

Helpful Background

- Strong basic mathematics
- Strong communication skills
- Good reading and comprehension skills
- Good penmanship
- Mechanical background



Career Opportunities

- Local: semi tractor/trailer driving; shorter routes
- Over-the-Road: semi tractor/trailer driving (long distance), absences from home of a week or more at a time

2009-10 Employment Facts

Average Hourly Wage \$15.40

Average Monthly Income \$3439.39

Employers

Chippewa Valley Airport Service; Eau Claire, WI
Dedicated Logistics Inc; Oakdale, MN
Eau Claire Transit; Eau Claire, WI
Elite Carriers; Wausau, WI
Farner Bochen; Carrol, IA
Grieb's Trucking; Boyceville, WI
Halvor Lines Inc; Superior, WI
Indianhead Food Service; Eau Claire, WI
Jay Bauer Trucking; Medford, WI
Kelly Iverson; Eleva, WI
Kolpe Building Products; Baldwin, WI
Lake's Gas; Eau Claire, WI
Lentz Farms Inc; Ridgeland, WI
Prince; Marshfield, WI
Roehl Transport; Marshfield, WI
Silent Thunder; Chippewa Falls, WI
Slumberland Furniture; Rice Lake, WI

First Term	Credits
458-341 Truck Driving 1	4
458-342 Truck Driving 2	3
458-343 Truck Driving 3	3
458-344 Truck Driving 4	2
Total Credits.....	12

Minimum Program Credits Required - 12

**This program will be a combination of traditional classroom, lab and online computer-based learning. The first two days of instruction will be delivered in a face-to-face computer lab. The remaining lecture portion of the courses will be delivered online, facilitated by your instructor.

For a complete listing of course descriptions see back of catalog.

458-341 Truck Driving 1

Covers the laws pertaining to the operation of a commercial motor vehicle (CMV). This course also focuses on how to properly inspect a CMV and how to operate one safely. Each student progresses according to his or her own abilities with the assistance of an instructor. Student must be 18 years of age when class begins. This course is not eligible for financial aid. Co-requisite(s): 458-342 Truck Driving 2 and 458-343 Truck Driving 3 and 458-344 Truck Driving 4. Restricted to students admitted to the following program(s): 30-458-1 Truck Driving.

458-342 Truck Driving 2

Focuses on understanding the paperwork connected with the trucking industry. This course also covers communication skills and security issues. Student must be 18 years of age when class begins. This course is not eligible for financial aid. Co-requisite(s): 458-341 Truck Driving 1 and 458-343 Truck Driving 3 and 458-344 Truck Driving 4. Restricted to students admitted to the following program(s): 30-458-1 Truck Driving.

458-343 Truck Driving 3

Further prepares students to obtain a commercial driver’s license. Learners have the opportunity to plan trips and manage loading procedures. Weight distribution techniques and security issues are also discussed. Student must be 18 years of age when class begins. This course is not eligible for financial aid. Co-requisite(s): 458-341 Truck Driving 1 and 458-342 Truck Driving 2 and 458-344 Truck Driving 4. Restricted to students admitted to the following program(s): 30-458-1 Truck Driving.

458-344 Truck Driving 4

Focuses on continuous improvement. This course is designed for students who have successfully obtained a commercial driver’s license. Operating skills and the role of a professional truck driver are stressed. Student must be 18 years of age when class begins. This course is not eligible for financial aid. Co-requisite(s): 458-341 Truck Driving 1 and 458-342 Truck Driving 2 and 458-343 Truck Driving 3. Restricted to students admitted to the following program(s): 30-458-1 Truck Driving.

Notes

Truck Driving

Offered in Eau Claire

August and January entry dates for full time students and August entry date for part time evening

31-442-1

If you enjoy problem solving as well as working with your hands, the Welding program could be for you. It combines theory, demonstrations, and hands-on experiences to prepare you to take a welding project from blueprints through final inspection. The Welding program offers training in basic welding techniques you'll rely on in your career:

- Oxyacetylene welding and cutting
- Shielded metal arc welding (SMAW, stick welding)
- Gas metal arc welding (GMAW, MIG, wire-feed)
- Flux-cored arc welding (FCAW)
- Gas tungsten arc welding (GTAW, TIG)

Your training will include advanced welding techniques:

- Robotic welding – set-up, programming, operation, and fixturing for automatic welding
- CNC plasma cutting – using a computer program to control the cutting on an automated plasma cutter

- CNC equipment processes
- Pipe welding – using advanced techniques with SMAW, GMAW, and GTAW processes
- Welding certification

You'll also learn plasma arc cutting, blueprint reading, layout and fabrication techniques, and metallurgy concepts.

Your job prospects are best when you're trained in the latest technologies – and that's what CVTC's Welding program has to offer you: instruction and skill development to meet the demands of today's workplace. This could be the career area you've been looking for!

Admission Requirements

- COMPASS® pre-entry assessment

Helpful Background

- High school industrial education courses including welding, metals, and machine shop
- Math

Career Opportunities

- Boilermaker Union
- Ironworker Union
- Production Welder
- Maintenance Welder
- Structural Welder
- Stainless Steel Welder
- Pipe Welder

- Sheet Metal Welder
- Welding Inspector
- Welding Foreman

2009-10 Employment Facts

Average Hourly Wage \$16.23

Average Monthly Income \$3170.73

Employers

Advanced Laser Machining; Chippewa Falls, WI
American Metal Fab; Eau Claire, WI
Ashley Anderson; Colfax, WI
Blackwater Diving; Morgan City, LA
CB & I, Inc (Construction Division); Woodlands, TX
Global Finishing Solutions; Osseo, WI
Haas Sons; Thorp, WI
Jeremy Manufacturing; Eau Claire, WI
Midwest Manufacturing; Eau Claire, WI
NMC Wollard; Eau Claire, WI
Northwest Enterprises; Eau Claire, WI
OEM Fabricators Inc; Woodville, WI
OEM Fabricators Inc; Neillsville, WI
Oshkosh Truck; Oshkosh, WI
Regal-Beloit Electric Company; Black River, WI
River Steel Inc.; West Salem, WI
Whitehall Specialties; Whitehall, WI



First Term	Credits
421-386 Welding-Blueprint Reading	2
442-303 Metals Technology 1	1
* 442-361 Basic Oxy-Acetylene & Arc Weld	5
* 442-362 Basic Wire Feed & Int Arc Weld	4
442-365 Welding Rigging/Forklift Trng	2
* 442-370 CNC Welding Processes	1
* 457-380 Layout and Fabrication I	2
+ 804-360A Math for Tech Trades-Welding	2
Total Credits.....	19

Second Term	Credits
442-301 Metallurgy.....	2
* 442-304 Metals Technology 2.....	1
* 442-360A Robotic Welding A.....	1
* 442-363 Adv Wire Feed & Arc Welding	5
* 442-364 Gas Tungsten Arc Welding.....	4
* 457-381 Layout and Fabrication II.....	2
+ 801-175 Job-Search Communications.....	1
Total Credits.....	16

Third Term	Credits
* 442-350 Basic Pipe Welding.....	5
* 442-360B Robotic Welding B.....	1
Total Credits.....	6

+ *May be offered as distance learning*

* *Prerequisite required; see course description*

Minimum Program Credits Required - 41

For a complete listing of course descriptions see back of catalog.

442-361 Basic Oxy-Acetylene & Arc Weld

Basic welding; design and selection of welding processes; laboratory experience to develop skills in oxyacetylene and basic Shielded Metal Arc Welding (SMAW, arc welding, stick welding); metal cutting procedures. This course requires the purchase of approximately \$440 in tools and equipment. Prerequisite(s): 421-386 Welding-Blueprint Reading (or taken concurrently). Restricted to students admitted to the following program(s): 31-442-1 Welding.

421-386 Welding-Blueprint Reading

Drawing fundamentals related to two and three view drawings; visual projection methods; freehand sketching; weld symbols and how to apply them.

457-380 Layout and Fabrication I

Gain skills in laying out projects from shop sketches or blueprints used in the welding industry; development of templates or patterns and various shop shortcuts. Use related machine operations and equipment to fabricate and assemble projects. Prerequisite(s): 421-386 Welding-Blueprint Reading (or taken concurrently). Restricted to students admitted to the following program(s): 31-442-1 Welding.

442-301 Metallurgy

The purpose of this course is to help students acquire basic metallurgy knowledge that will be useful in their welding careers. The students will study the types and uses of steel; modification and prediction of metal behavior; crystalline structure before and after modification; lab work focuses on using the knowledge gained.

442-303 Metals Technology 1

Introduces the student to a variety of technical topics related to the Welding program. Topics will include: machine settings, wire and electrode designations, drilling operations, data sheet interpretation, structural steel methods, maintenance of welding equipment, etc. Discussion will also take place on issues such as work ethics and job/work attitudes.

Notes

Welding

Apprenticeships

Apprenticeship enables a person to enter a skilled occupation and achieve journey level status through on-the-job skill development and regular classroom related instruction. In a formalized training program, the student “earns a wage as they learn.” On-the-job training (OJT) is combined with related instruction over a period of years to attain the journey level status. An apprentice is a person registered by a legal agreement between an employer, the Bureau of Apprenticeship Standards, and the Employee. The apprenticeship contract establishes the details between the parties whereby he/she learns a skilled craft or trade in exchange for his/her services.

Apprentice Trade Instruction Available at CVTC:

- Electric Line Worker
- Electrician (construction)
- Electrician (industrial)
- Electrician (residential)
- Plumbing
- Sheet Metal Worker/EST
- Steamfitting
- Steamfitting Service

For information and application forms, you may contact any of the following: CVTC Apprenticeship Center, at the Manufacturing Education Center Gateway Campus at 715-874-4602 or 715-874-4604, the Bureau of Apprenticeship Standards located at the Chippewa Falls Campus at 715-738-3853, area Job Centers and local trade union offices. (Additional information can be found at www.cvtc.edu, under Programs & Courses/Apprenticeship Catalog.)

CVTC offers an Associate Degree in Technical Skills to individuals who have completed an apprenticeship program and attained the journey level status. The degree is specific to the occupational goals of the individual seeking the degree. Please contact a program counselor at 715-833-6346. The state website for apprenticeship programs is www.dwd.state.wi.us.

Short Term Training Certificates

Business Certificates

Customer Service Representative (TC-106-6)

Students will receive the foundation to exceed customer expectations as a Customer Service Representative. They will develop effective communication skills to maintain relationships with internal and external customers. They will develop techniques to provide superior customer service using the telephone, computer, and the Web in a global and diversified economy.

Course #	Course Title	Credits
+ 103-102	Microsoft Office Suite	2
+ * 106-105	Business Words @ Work	3
+ 106-140	Office Procedures.....	3
+ 106-146	Quality Customer Service	2
Total Credits		10

Human Resource Generalist (TC-196-2)

This certificate is designed for supervisors or employees who desire or have recently taken on Human Resource responsibilities. The concepts covered in the certificate would also serve those who are looking for a career change or a comprehensive overview of human resources, outside their current specialty area. The certificate consists of five three-credit courses listed below. Each course is conveniently offered at night and does not require a prerequisite.

Course #	Course Title	Credits
196-110	Employee Benefits	3
+ 196-111	Perform Mgmt & Empl Reward Sys	3
+ 196-112	Training Systems	3
+ 196-113	Human Resource Law	3
+ 196-114	Recruitment & Selection	3
Total Credits		15

Business Certificates

Insurance Claims Specialist (TC-162-2)

This certificate prepares individuals to work as an insurance claims specialist in the area of Water Mitigation. Course work will prepare individuals to use technology water damage restoration techniques and utilizing appropriate customer service procedures. This type of work provides for both full and part time employment in a changing industry. Successful completers of the coursework shown below will prepare one to take state insurance exams, beginning industry certification for water mitigation and become eligible for employment with a local company, Harmon Solutions (Code Blue). Employment potential with other area insurance companies or manufacturers of water damage equipment is also promising. Admission requirements for this certificate includes: a high school diploma or equivalency.

Helpful background: Strong science aptitude, oral and written communication skills, detail-oriented with good organizational skills, strong reading and problem-solving skills, computer literacy and outgoing and enjoy working with people.

Course #	Course Title	Hours
* 162-410	Insurance Term. & HO-3 Policy	9
* 162-411	AIC 33-Claim Hndlg Princ/Pract	26
* 162-412	Midwest Work Ethic	2
* 162-413	AIC 35-Property Loss Adjusting	34
* 162-414	Ins: Gramm-Leach-Bliley Act	1
* 162-415	Water Mitigation	60
* 162-416	Telephone Techniques	2
* 162-417	Legalities-Claims Note-taking	3
Total Hours.....		137

Leadership (TC-196-7)

No matter what your career, success depends on demonstrating good leadership skills in a very competitive workplace. This certificate will provide you with the skills and understanding necessary to become more effective in leadership positions in business, industry, government, and healthcare. Increase your knowledge in personal leadership and management techniques, ethics and change. Courses in this certificate are offered at varying times and delivery methods to accommodate your needs

Course #	Course Title	Credits
+ 102-112	Principles of Management	3
+ * 102-113	Business Ethics	3
+ * 196-169	Diversity & Change Management	3
+ * 196-190	Leadership Development	3
Total Credits		12

+ May be offered as distance learning
* Prerequisite required; see course description

Short Term Training Certificates

Business Certificates

Marketing Management Certificate (TC-104-3)

This certificate will explore marketing strategies that will focus on developing an appropriate marketing mix for an organization and developing a marketing plan that will reach the desired target market.

Course #	Course Title	Credits
+ 104-102	Marketing Principles	3
+ 104-104	Professional Selling	3
+ * 104-125	Promotion Principles.....	3
* 104-183	Marketing Management	3
Total Credits		12

Paralegal Post-Baccalaureate Technical Certificate (TC-110-1)

This Paralegal Post-Baccalaureate Certificate may be earned in one year of study if the student has already completed a Bachelor's (BS or BA) or a higher degree. To complete the certificate, the student will need 24 credits in paralegal (110) courses. The American Bar Association (ABA) requires at least four of these classes must be taken in a traditional classroom - not online. You must be accepted into the Paralegal Program or Paralegal Certificate to register for 110 legal specialty classes. Please contact the Program Director or the Counseling Department to determine if the Associate Degree Program or the Paralegal Certificate will best meet your needs. Minimum 2.0 cumulative GPA required for successful completion of certificate.

**Students may take additional legal specialty courses beyond the eight required courses.

Course #	Course Title	Credits Available
+ 110-101	Paralegal & Legal Ethic, Intro	3
+ 110-102	Civil Litigation I	3
+ * 110-103	Civil Litigation II	3
+ 110-104	Legal Research	3
+ * 110-105	Legal Writing	3
Choose 1 course(s) from the following:		
+ * 110-114	Administration of Estates	3
+ * 110-168	Criminal Law-Paralegal	3
Choose 1 course(s) from the following:		
+ * 110-106	Family Law	3
+ * 110-107	Legal Aspects of Bus Organiz	3
Choose 1 course(s) from the following:		
+ * 110-142	Paralegal Internship	3
+ * 110-143	Paralegal Field Study	3
Total Credits		24

Business Certificates

Professional Selling Certificate (TC-104-4)

This certificate will focus on developing a customer base and building long-term relationships with clients. The participants will apply selling basics in order to enhance the buying experience for their customers and the bottom line for their employers.

Course #	Course Title	Credits
+ 104-102	Marketing Principles	3
+ 104-104	Professional Selling	3
+ 104-111	Consumer Behavior	3
* 104-140	Business to Business Selling.....	3
Total Credits		12

Records & Information Mgmt. Specialist Certificate (TC-106-5)

Who should receive this certificate? Persons who are employed or interested in positions such as records and information managers or supervisors; records technicians/coordinators/analysts; records and document imaging analysts; legal records coordinators; archivists; office or administrative services managers and administrative support personnel; and others who need to provide the right information to the right people at the right time at the best possible cost. If you are responsible for the creation, use, distribution, maintenance, and disposition of information in your organization, whether in paper, image, or digital form, this five-course certificate may be of interest to you. You may study and earn this 15-credit certificate completely via the Internet.

Course #	Course Title	Credits
+ 176-105	Foundations of RIM	3
+ * 176-108	RIM Fundamentals	3
+ 176-111	Records Classification Systems	3
+ * 176-121	Records & Info Technology	3
+ * 176-140	RIM Applications	3
Total Credits		15

Retail Management Certificate (TC-104-2)

This certificate will explore the retail industry and prepare participants for retail management and retail merchandising opportunities.

Course #	Course Title	Credits
+ 104-102	Marketing Principles	3
+ 104-104	Professional Selling	3
+ 104-108	Retail Management	3
+ 104-111	Consumer Behavior	3
Total Credits		12

+ May be offered as distance learning

* Prerequisite required; see course description

Short Term Training Certificates

Business Certificates

Small Business Accounting Certificate (TC-101-1)

Certificate options will enable students to upgrade accounting skills used in a current job; prepare for employment advancement where accounting knowledge is needed; and obtain entry-level accounting skills used in accounting assistant positions working with accounts receivable, accounts payable, and payroll. Complete all credits from the list below.

Course #	Course Title	Credits
+ * 101-106	Acctg Spdsheets & Calculations	2
+ 101-111	Accounting I	4
+ 101-121	Payroll Accounting	2
+ * 101-150	Accounting Software Apps	3
+ 103-102	Microsoft Office Suite	2
Total Credits		13

A grade of "C" or better is required in all Accounting program courses.

Small Business Marketing Certificate (TC-104-1)

This certificate is designed to help prepare a person to implement effective marketing and management strategies for a small business. This is an ideal training program to help a person move up in the organization or manage their own small business.

Course #	Course Title	Credits
+ 102-130	Small Business Management	3
+ 104-102	Marketing Principles	3
+ 104-104	Professional Selling	3
+ * 104-125	Promotion Principles	3
Total Credits		12

Business Certificates

Software Specialist (TC-106-10)

This certificate is designed to give students experience in the beginning and intermediate skills necessary to become a competent user of various productivity software. Software studied will include Word, Excel, Access, PowerPoint, and Publisher. Students will learn these skills using textbook tutorials and case problems as well as real-world projects.

Course #	Course Title	Credit
+ 103-102	Microsoft Office Suite	2
+ * 106-164	Business Presentations & Publ	3
+ * 106-171	Adv Software Applications	3
+ * 106-174	Business Software Solutions	3
Total Credits		11

Short Term Training Certificates

Computer Certificates

.NET-VB/ASP (TC-152-7)

This certification builds on the foundation of programming using VB.NET. In this certificate, you will explore database usage using ADO.NET, create Crystal Reports in a project, develop objects and classes, and incorporate other techniques using the .NET family of products.

Course #	Course Title	Credits
+ 152-101	Programming Fund - JavaScript	3
* 152-103	.NET-VB	3
* 152-105	.NET-ASP	3
+ 152-106	Operating Systems	3
+ * 152-132	SQL	3
Total Credits		15

3D Game/Simulation Programming I (TC-152-5)

Interactive simulations are set to revolutionize industry, business, and educational training. Simulation training is cost effective, safe, and repetitive. This certification will offer the student an introduction to the programming and 3D graphics toolsets needed to develop an interactive simulation.

Course #	Course Title	Credits
+ 152-101	Programming Fund - JavaScript	3
* 152-160	C++ Programming	3
152-161	3D Modeling 1	3
* 152-162	3D Simulation Programming	3
Total Credits		12

3D Game/Simulation Programming 2 (TC-152-13)

In this certificate, attention will be focused on the design elements of websites, tools to be used to develop graphics, Macromedia Dreamweaver, Macromedia Flash, and programming Flash with ActionScript.

Course #	Course Title	Credits
* 152-165	3D Modeling 2	3
+ * 152-166	3D Simulation Capstone	3
Total Credits		6

Computer Certificates

Cisco Networking Academy Certificate (TC-150-1)

Cisco Systems, the worldwide leader in networking for the Internet, is a partner with CVTC. This training program is designed to teach people to design, build, and maintain computer networks capable of supporting national and global organizations. Participants who complete the 10 credits of specially developed curriculum and certifications testing will be ready to begin working in the Information Technology field.

Course #	Course Title	Credits
150-150	Cisco 1: Network Fundamentals	3
* • 150-151	Cisco 2: Routing Protocol/Conc	3
* • 150-153	Cisco 3: LAN Switch & Wireless	2
* • 150-154	Cisco 4: Accessing the WAN	2
Total Credits		10

IT Network Support Associate Certificate (TC-150-2)

Completion of this certificate prepares the learner to perform basic installation, configuration and support of Unix/Linux, Novell eDirectory and Microsoft network operating systems as well as provide essential support to desktop operating systems such as Microsoft Windows and Linux in a networked environment. The learner will also be prepared to perform numerous types of basic hardware installation and maintenance functions on PC platforms. This certificate can be completed in 2 semesters.

Course #	Course Title	Credits
+ • 150-120	Network Diagramming	1
• 150-123	IT Networking Concepts	3
• 150-150	Cisco 1: Network Fundamentals	3
* • 150-160	Network Directory Services	3
* • 150-165	Microsoft Windows Network Adm	3
* • 150-175	Unix System Administration	3
* • 605-123	Computer Hardware	4
• 605-134	Network Infrastructure Cncpts	2
Total Credits		22

• A grade of "C" or better is required in all prerequisite courses.

Database Analysis and Development (TC-152-11)

Every information system depends on data. This certificate provides course work to provide a solid foundation in database design and development – from the initial data analysis phase through the actual database creation. In both UNIX and Windows environments, students create and manipulate relational databases using the SQL language for a variety of database management systems, such as: Oracle, MySQL, and Access.

Course #	Course Title	Credits
+ 152-106	Operating Systems	2
152-125	Information Architecture	3
+ * 152-132	SQL	3
152-136	Database Design	3
Total Credits		11

+ May be offered as distance learning

* Prerequisite required; see course description

Short Term Training Certificates

Computer Certificates

JAVA (TC-152-6)

This certificate includes an introduction to programming and logic as well as computer and operating system concepts. Students will design and develop a database application using Oracle DBMS and Structured Query Language. Following the basics, students will learn to create Java classes and write their own methods. Basic programming skills, such as decision-making, looping, string manipulation, and arrays, followed by advanced concepts of Input/Output, Exception classes and packages will be included. New material emphasized will include Collections, JDBC, Servlets and Java Server Pages.

Course #	Course Title	Credits
+ 152-101	Programming Fund - JavaScript	3
+ 152-106	Operating Systems	2
* 152-129	Java Web Programming	3
+ * 152-132	Database 1	3
* 152-142	OO Analysis & Design-Java	3
Total Credits		14

Network Hardware Support Specialist Certificate (TC-150-3)

The Network Hardware Support Specialist Certificate prepares individuals to install, configure, and administer a variety of networking devices that are common in today's LAN environments. This certificate is intended for electronics and automation technicians whose duties include some computer and/or network maintenance. This certificate is also appropriate for students enrolled in the Electromechanical Technology Program at CVTC and adds value to that degree. This certificate may take two to three semesters to complete.

Course #	Course Title	Credits
+ 150-120	Network Diagramming	1
150-150	Cisco 1: Network Fundamentals	3
* • 150-151	Cisco 2: Routing Protocol/Conc	3
* • 150-183	Wireless Networking	2
* • 605-128	A+ Review & Advanced Hardware	3
Total Credits		12

• A grade of "C" or better is required in all prerequisite courses.

Computer Certificates

Web Development 1 (TC-152-8)

This certificate starts with an introduction to programming using VB.NET. Courses also include content to create dynamic Web pages using XHTML and Cascading Style Sheets (CSS), and extending into creating dynamic web applications using client-side JavaScript and the server-side PHP environment. An exploration of Macromedia Dreamweaver and Flash is also included.

Course #	Course Title	Credits
+ 152-101	Programming Fund - JavaScript	3
+ 152-107	Web 1-XHTML & CSS	3
+ * 152-108	Web 2-JavaScript & PHP	3
+ 152-121	Web Development Tools	3
Total Credits		12

Web Development 2 (TC-152-9)

This certificate is a follow-up to the Web Development 1 technical certificate. In addition to creating web pages, XML, AJAX, advanced PHP and database applications related to web pages are explored in depth.

Course #	Course Title	Credits
+ 152-106	Operating Systems	2
+ * 152-109	XML/AJAX	3
+ * 152-132	SQL	3
* 152-164	Web 3	3
Total Credits		11

Web Multimedia (TC-152-10)

In this certificate, attention will be focused on the design elements of websites, tools to be used to develop graphics, Macromedia Dreamweaver, Macromedia Flash, and programming Flash with ActionScript.

Course #	Course Title	Credits
+ 152-107	Web 1-XHTML & CSS	3
+ 152-117	User Interface Design	2
+ 152-121	Web Development Tools	3
+ 152-167	Flash Development 1	3
Total Credits		11

+ May be offered as distance learning
* Prerequisite required; see course description

Short Term Training Certificates

Manufacturing/Quality Certificates

Advanced Machining-Swiss (TC-420-1)

This (9 credit) certificate will provide the student instruction on the fundamentals of Swiss style CNC machines including; basic history, terms and definitions, basic Swiss machine operation, part processing, manual and computer supported part programming, as well as CAD/CAM programming with simulation and program analysis. Swiss style machining is a unique type of turning center in which a sliding head stock pushes material through a guide bushing and past stationary tools to create very accurate complex shapes and is very adequate for machining parts at the micro level. Live rotary cross tools create secondary features, such as holes or slots, and other geometries that would normally require multiple machines and setups. Multiple spindled machine tools, such as Swiss style machining centers, enable parts to be completely machined in one setup. Medical devices, electronic devices, and aerospace components are a great fit for this type of technology. These machine tools regularly apply exotic materials such as titanium, nickel, stainless steel alloys. This highly specialized advanced machine training will benefit individuals who are highly motivated thinkers who have the desire to explore the Swiss machining market as an employer or employee.

Course #	Course Title	Credits
420-381	CAD/CAM for Swiss	3
420-382	Swiss 1	3
420-383	Swiss 2	3
Total Credits		9

Manufacturing/Quality Certificates

CAD Operator (TC-606-2)

Provides instruction for the entry level mechanical CAD (Computer Aided Design) operator. Software operation using industry standard AutoCad and SolidWorks software are used during instruction to develop detailed design drawings and specifications for mechanical equipment, dies, and tools using computer-assisted drafting (CAD) equipment. Two dimensional drawings, isometric drawings, three dimensional drawings and assemblies will be created. Print reading, visualization, sketching, and design document structuring are addressed. The student will have the opportunity to develop a portfolio of multiple CAD applications. Fundamentals Geometric Dimensioning and Tolerancing principles are applied to mechanical part designs based on the current ASME Y14.5 standard. Courses in the certificate introduce the student to a broader range of manufacturing process, related part feature creation, material properties and the effects of production variation on design and part productibility.

Course #	Course Title	Credits
606-102	Technical Drafting-CAD	3
606-104	Geometric Dimen & Tolerancing	3
606-130	Solid Modeling I	3
* 606-131	Solid Modeling II	3
606-160	Mfg. Materials Processes	3
606-161	CAD, Basic	3
Total Credits		18

Course Descriptions

001-Horticulture

- 001-100 Horticulture, Introduction to** 3 cr
This course provides an overview of the horticulture profession. Its role and importance throughout history, current trends, and career opportunities will be covered. Particular attention is given to horticulture crops and their use, plant classification, plant propagation, and the inter-relationships between the environment, plant growth, and plant development.
- 001-102 Landscape Design & Construction** 2 cr
Students will learn how to create a sustainable landscape design that is functional, maintainable, environmentally sound, cost effective, and aesthetically pleasing. Emphasis will be on the landscape design sequence and implementation of the completed landscape design.
- 001-103 Turf Mgmt & Irrigation Systems** 2 cr
Examines how to effectively establish and maintain professional lawn/turf. Covers identification and selection of turf grasses, establishment and maintenance practices. The course will include nutrient needs, integrated pest management, diagnosing problems, corrective strategies, irrigation principles and irrigation implementation.
- 001-104 Greenhouse Management** 2 cr
A variety of topics fundamental to managing a greenhouse will be addressed in this course. The overall operation of a green house facility including types of structures, heating/cooling options, lighting, insect/disease management, watering methods, and equipment will be examined.
- 001-108 Bus Apps for Green Industry** 2 cr
Marketing practices of products and services for the Green Industry ranging from product pricing to distribution of product will be studied. Students will analyze new and established strategies for selling through stores, mail order catalogs and Internet sites. Effective techniques for attracting and keeping customers will be covered.
- 001-109 Horticulture Internship** 3 cr
Individuals participating in a work experience will have an opportunity to practice acquired skills and knowledge from their program coursework. This course is designed to help the student, instructor, and site supervisor to focus on major outcomes of the training and general readiness for employment in their chosen field.
Prerequisite(s): 001-100 Horticulture, Introduction to. Restricted to students admitted to the following program(s): 10-001-1 Landscape Plant Turf Mgmt.
- 001-110 Integrated Plant/Pest Mgmt** 2 cr
The course will provide students with the knowledge and skill necessary to diagnose plant problems and control strategies in the landscape. Particular attention is given to insects, diseases, weeds and cultural needs of landscape plants.
- 001-111 Sustainable Land Use Mgmt** 3 cr
Analyze the existing landscape to determine the best management practices for the location. Students will gain practical knowledge on procedures for maintaining established landscapes and the economic return. Benefits on well selected and skillful placement of native plant material for the landscape will be an integral part of the overall approach to sustainable land use in this course.
- 001-112 Interior Plants & Plantscaping** 2 cr
This course covers topics in foliage plant characteristics, requirements, and identification. Particular attention is placed upon identification of foliage plant material and the classification of these materials according to cultural and interior use characteristics.
- 001-113 Pesticide & Fertilizer App** 3 cr
This course focuses on the study and application of pesticides and fertilizers used on horticulture crops. Specific areas of study include chemical classification, mode of action in plants, injury symptoms, resistance

in plants and pests, mixing and loading concerns, application methods and concerns, recordkeeping and posting requirements. Students will be required to take the Commercial Pesticide Applicator Certification exam as part of this course.

- 001-114 Entrepreneurship for Green Ind** 2 cr
Students will investigate businesses utilizing a variety of methods to create a profitable return in the production of goods and services for the Green Industry. Exploring the small business aspects of this industry will be approached through practical learning activities.
- 001-115 Vegetable and Fruit Production** 2 cr
Students will study the commercial production of vegetables in the Midwest while examining the sustainability of the various crops in the industry. Key components will be site selection, integrated cropping systems, cultural and management practices, profitability and efficiencies.
- 001-116 Landscape Plants** 3 cr
Study of annuals, perennials, and roses. Selection, care, and tips to best utilize flowers and foliage plants effectively in their landscape. Groundcovers and vines will be included. Identification of trees and shrubs and their use in the landscape with emphasis on texture, color, bark, flowers, and fruit will be examined. Students will learn proper planting and maintenance practices along with critical pests and diseases that can affect the health of these landscape plants.
- 001-199 Horticulture Ind Study** 2 cr
This course is designed to give the student an opportunity to research an area of horticulture, in one of the following areas; landscape, greenhouse production, plant or turf management. The student's plan of study will be preapproved by the instructor. A final written/oral report will be required.

006-Agri-Business

- 006-110 Genetics** 1 cr
Genetics related to plants, animals; cell division.
- 006-114 Legal Aspects of Agriscience** 2 cr
Contractual agreements; consumer rights and responsibilities; hazardous materials handling; hiring and protection of employees; debt collection; related government agricultural policy and programs; insurance needs.
- 006-116 Introductory Soils** 3 cr
Provides fundamental knowledge of soils and growth media. Course topics include soil formation and development, soil components, soil profile, soil classification, and soil conservation. Participants will experience soils concepts through the completion of hands-on activities.
- 006-120 Livestock Computer Apps** 2 cr
This course will apply the use of livestock management software, database management software, spreadsheets and specialized on-farm applications.
- 006-122 Agriculture Facilities** 2 cr
Livestock building design, drying grain, forage crops; movement and storage of grains, forages, and manure storage.
- 006-123 Agriculture Equipment** 3 cr
This course provides fundamentals of calibration and maintenance of planting, seeding, harvesting, and milking equipment, including emphasis on precision agricultural concepts. By the end of the course, participants will have the skills and knowledge to operate, maintain, and calibrate precision agriculture equipment components.
- 006-130 Agribusiness Financial Mgmt.** 2 cr
This course focuses on the financial management of farm and agriculture-related businesses. Special emphasis is given to the areas of business types and systems, tools for making financial decisions, financial statement analysis, budgeting business operating and capital expenses, obtaining credit, depreciation, and other business tax concerns.

Course Descriptions

006-138 Principles of Ag-Products Mktg	3 cr	006-168 Row Crop Management	2 cr
This course will apply supply and demand economic principles to the marketing of agricultural commodities including grains, livestock, and milk. This course will focus on the development of marketing strategies for agricultural commodities using cash sales, forward contracts, hedging, and options.		This course will focus on the cultural practices important in the profitable production of row crops common to Wisconsin (corn and soybeans). Specific attention will be given to seed bed preparation, planting, variety selection, fertilization, weed control, insect control, disease control, harvesting, drying and storing corn and soybeans. Budgeting the row crop enterprise will be covered in instruction.	
006-140 Agribusiness Sales	3 cr	006-169 Forage Crop Management	2 cr
Provides basic knowledge of agribusiness sales and marketing. Topics include recognizing potential customers and building a positive customer relationship, designing marketing plans, and using marketing and sales databases. The concepts will be presented using hands-on activities.		Cultural practices; varietal selection; calculations of forage quality; forage stand evaluation.	
006-141 Intro to Ag Engineering	3 cr	006-180 Animal Science	3 cr
A study of engineering concepts and principles as they apply to farm power and machinery, electrical energy and processing, structures and environment, irrigation and drainage, and food engineering. The laboratory will provide an opportunity to develop techniques in design, planning, construction, and performance evaluation.		Provides fundamental knowledge of the animal science field. Topics include animal health, animal environments, anatomy and physiology, genetics and reproduction, animal feedstuffs, and job-related safety. Participants will experience animal concepts through the completion of hands-on activities.	
006-151 Plant Protection Products	2 cr	006-182 Animal Reproduction	3 cr
This course focuses on the study and application of crop protection products used on agronomic crops in the upper Midwest. Specific areas of study include chemical classification, of action in plants, injury symptoms, resistance in plants and pests, mixing and loading concerns, application methods and concerns, recordkeeping and posting requirements and the chemical's application to precision agriculture. Students will be required to take the Commercial Pesticide Applicator Certification exam as part of the course.		Reproductive process in animals; conception, fetal development.	
006-160 Plant Science	3 cr	006-184 Herd Health & Sanitation	2 cr
Provides fundamental knowledge of plant components and their functions. Topics include pollinating and propagating plants, germinating seeds, plant nutrients, and factors affecting photosynthesis, respiration, and transpiration. Participants will experience plant components and their functions through the completion of hands-on activities.		Maintain healthy dairy herd; reducing somatic cell count; role of vaccines, antibiotics, probiotics.	
006-161 Weed Identification	2 cr	006-186 Managing Youngstock & Dry Cows	1 cr
The course will focus on the classification and identification of weeds commonly found in the upper Midwest (primarily the 30 common Wisconsin weeds required to pass the Wisconsin Certified Crop Advisor Test). Weeds will be identified by their seed, seedling, and mature plant characteristics. Integrated Pest Management (IPM) control methods appropriate for plant families and life cycle will be discussed and evaluated.		Non-lactating cow to calving, raising heifers to parturition.	
006-162 Soil Fertility and Fertilizers	2 cr	006-188 Feed Analysis	2 cr
This course will review soil chemistry, plant required nutrients, soil testing, soil test interpretation, liming soils, soil fertilizers, fertilizer analysis, methods of fertilizer application, manure applications, environmental concerns about fertilizer applications, and economics of fertilizer use. Emphasis will be on the profitable use of fertilizers in crop production.		Dairy feeds; quality and nutritional value.	
006-164 Plant Pathology and Entomology	2 cr	006-189 Ration Formulation	2 cr
The course will focus on scouting practices for the common pests of corn, alfalfa, and soybeans. Class time will be split between 1) classroom lecture, 2) discussion concerning the identification and management of pests, 3) field applying approved scouting practices, and 4) discussing problems brought in from the field--weeds, diseases, insects, etc.		Nutritional requirements for growth, reproduction and lactation stages.	
006-166 Computer Applic-Agronomy	2 cr	006-190 Agriscience Internship	3 cr
This course will focus on the use of commercial computer software programs specifically designed to facilitate crop production and management. Specific software packages the student will work with include: Agrisource, Nutri-Plan, SNAP; and may include introduction to: Select, ABCS, MACHCOST, and other software which comes available.		Individuals participating in a work experience will have opportunity to practice acquired skills and knowledge from their program coursework. This course is designed to help the student, instructor, and site supervisor to focus on major outcomes of the training and general readiness for employment in their chosen field. Restricted to students admitted to the following program(s): 10-006-3 Agriscience Technician.	
		006-191 Adv Agriscience Internship	2 cr
		This course is custom designed for students desiring advanced training in an instructor-approved career emphasis. This course will focus on a particular aspect of animal science or agronomy as agreed upon by the student, instructor, and cooperating employer. Competency based projects will be developed, presented, and evaluated at specified dates. The cooperating employer will also complete an assessment of the student's identified competencies. Restricted to students admitted to the following program(s): 10-006-3 Agriscience Technician.	
		006-192 Farm Business Spanish	2 cr
		Students will acquire Spanish speaking skills appropriate for the dairy and livestock industry. Emphasizes the use of vocabulary and expressions needed for communication in the dairy and livestock industry. Addresses cultural aspects of working with Spanish speaking populations.	
		006-193 Interm Farm Business Spanish	2 cr
		Intermediate Farm Business Spanish is a course that provides experience to improve conversational Spanish language skills with an emphasis on the dairy farm business setting.	
		006-199 Agriscience-Ind Study	3 cr
		This course is designed to give the student an opportunity to research an area of agriculture production, agriscience or agribusiness that is not part of the regular curriculum. The student learning plan, including required reports and projects, are developed in conjunction with the instructor.	

Course Descriptions

007-Biotechnology

007-111 Applied Biotechnology 2 cr

Applications of biotechnology to agriscience; tissue culturing such as cloning, cell manipulation and gene transfer.

090-Farm Business Management

090-310 Farm Bus Planning & Risk Mgmt 4 cr

Emphasizes management skills and concepts necessary for farming in today's changing technology and farm business financing. Organize and maintain farm business records, interpret and analyze the records to assist in making sound farm management decisions. Entire farming operation is assessed and plans are developed for future needs, goals and objectives.

Restricted to students admitted to the following program(s): 30-090-1 Farm Bus & Production Mgmt.

090-320 Land Use Management 4 cr

Prepare for land use and nutrient management, develop plan for equipment maintenance and replacement, study alternative energy sources, implement a farm safety plan, and implement environmental land use recommendations.

Restricted to students admitted to the following program(s): 30-090-1 Farm Bus & Production Mgmt.

090-330 Precise Agronomics & Energy Mgmt 4 cr

Crop management, including planning, planting, care, harvesting, storage, and marketing.

Restricted to students admitted to the following program(s): 30-090-1 Farm Bus & Production Mgmt.

090-340 Livestock Nutrition & Reproduction 4 cr

Apply livestock nutrition principles and complete a farm business analysis.

Restricted to students admitted to the following program(s): 30-090-1 Farm Bus & Production Mgmt.

090-350 Farm Bus Analysis & Mkt Strat 4 cr

Computerized financial records, credit, budgeting, farm estate planning, financial analysis, and risk management.

Restricted to students admitted to the following program(s): 30-090-1 Farm Bus & Production Mgmt.

090-360 Livestk Fac, Health & Biosecurity 4 cr

Dairy production including housing youngstock, breeding and sire selection, herd health, quality milk production, and marketing.

Restricted to students admitted to the following program(s): 30-090-1 Farm Bus & Production Mgmt.

090-390 Cash Grain Crop Mgmt 4 cr

The course content focuses on issues and concerns of particular interest to the student involved in the production of agronomic or specialty crops for cash sale. Topics addressed include marketing alternatives and strategies; biotechnology applications in crop production; advanced production practices; financial management of the crop enterprise; and human resource issues. The course includes 72 hours of group instruction and 8 hours of individual on-farm instruction.

Restricted to students admitted to the following program(s): 30-090-1 Farm Bus & Production Mgmt.

090-391 Mktg/Fin Mgmt in Grain Prod 4 cr

This course content focuses on issues and concerns of particular interest to the student involved in the production of agronomic or specialty crops for cash sale. Topics addressed include cost of production/enterprise accounting, opportunities for price premiums, alternate uses of beans, corn, etc., carbon credits, business analysis, insurance issues, use of credit, and alternate investments.

090-393 Felty/Equip Mgmt in Grain Oper 4 cr

This course content focuses on issues and concerns of particular interest to the student involved in the production of agronomic or specialty crops for cash sale. Topics addressed include GPS applications, tillage alternatives, innovative technologies, transportation, equipment maintenance and economics, as well as storage, drying, and handling.

090-394 QuickBooks for Farmers 1 cr

This course is designed to introduce farm owners/bookkeepers to the skills necessary to utilize QuickBooks computerized recordkeeping software. It is tailored to the farm population. We will master the skills of printing checks, paying bills, generating reports, invoicing customers, and tracking expenses. You will be able to look more professional utilizing customized invoices and sales receipts. You will design your own chart of accounts that fits the type of farm operation that you have. You will also be able to organize your company information and the information of your suppliers and customers so it is easily accessible and organized. This is a hands-on course. Please bring a copy of your last year's financial records to use as a guide in setting up your QuickBooks Template.

090-395 Basic Comp Skills for Farmers 1 cr

The course is designed to introduce the farm population to the basic skills needed to operate a computer. The class will start by introducing the everyday operations of a home computer including such things as power supplies, printers, memory, computer speed, internet options, and everyday maintenance. We will then move into the basics of utilizing software such as word processing, power point, and spreadsheet basics. Students will learn how to set up folders in which to save data and keep it organized. A portion of the course will also deal with the basics of internet access. We will explore how to navigate the internet, conduct searches, set up favorite websites, email, and multimedia options. This course is designed for individuals who have limited knowledge of computer usage.

101-Accounting

101-105 Accounting, Intro to 3 cr

This is an introductory course designed to introduce the learner to the basic accounting language and concepts of business entities. Skills such as, analyzing business transactions, applying fundamental accounting concepts, identifying accounting control procedures, and evaluating financial statements will be developed. This course is intended for the non-accounting major.

101-106 Acctg Spdsheets & Calculations 2 cr

This course introduces students to the touch method for ten-key calculators. Students are also introduced to intermediate Excel concepts with accounting applications. Students will utilize a variety of financial, analysis, and database functions as they create, format, and modify worksheets in Excel.

Prerequisite(s): 101-111 Accounting I and 103-102 Microsoft Office Suite.

101-111 Accounting I 4 cr

This course prepares the learner to analyze, record, summarize and interpret accounting information. This course focuses on business transactions, financial statements, merchandising business transactions, special journals, internal controls, receivables and plant assets. The learner will prepare accounting transactions for a practice set, including month-end transactions and preparation of the financial statements.

101-113 Accounting II 4 cr

This course presents basic concepts for partnerships and corporations. It introduces current liabilities, bonds, cash flow statement preparation, financial statement analysis, cost-volume profit, and budgeting. The course

Course Descriptions

includes a practice set in which the student records transactions, records adjusting entries, and prepares financial statements for a corporation.

Prerequisite(s): 101-111 Accounting I.

101-116 Intermediate Accounting I 4 cr

This course requires the learner to apply accounting information to make business decisions. The course builds upon previously learned accounting principles and stresses a more complex application of these principles.

Prerequisite(s): 101-113 Accounting II.

101-117 Intermediate Accounting II 4 cr

This course is designed to utilize the students previously learned accounting concepts through a more complex application of accounting principles. Students will study fixed asset utilization, debt and equity investments, EPS calculations, and financial statement analysis. This course is primarily a problem-solving course involving considerable reasoning and logic.

Prerequisite(s): (101-116 Intermediate Accounting I or 101-115 Accounting III).

101-118 Managerial Accounting 3 cr

This course will help the accounting student learn how to use accounting information to make business decisions. The course studies cost system designs, cost management, budgeting, activity-based costing, and cash management.

Prerequisite(s): 101-113 Accounting II.

101-121 Payroll Accounting 2 cr

This course introduces the fundamentals of payroll accounting and payroll tax laws. Students will learn how to process payroll throughout the entire payroll processing cycle. Students will calculate payroll deductions and related deductions, make basic payroll entries, and learn how to maintain payroll records. Students will learn how and where to file federal and state payroll tax documents.

101-123 Income Tax I 4 cr

This course introduces the learner to federal and Wisconsin income tax laws with an emphasis on preparation of individual and small business income tax returns. Students learn to apply federal and Wisconsin tax laws relating to gross income, exemptions, filing status, deductions, retirement plans, gains and losses, depreciation, business income and deductions, credits, special taxes, and payments.

Prerequisite(s): 101-111 Accounting I.

101-125 Cost Accounting 3 cr

The study of cost accounting provides a practical approach to job order and process cost accounting systems. The course blends theory with practical application of problems and case studies. Topics include budgeting, standard cost variances, direct costing, and break-even analysis.

Prerequisite(s): 101-113 Accounting II.

101-126 Income Tax Preparation 2 cr

This course provides students with a practical application of individual income tax laws. Students will exhibit professionalism, interview taxpayers, use tax resources, and prepare individual income tax returns using software and electronic filing. Students practice these skills while participating in the Internal Revenue Service sponsored Voluntary Income Tax Assistance program.

Prerequisite(s): 101-123 Income Tax I.

101-127 Auditing 2 cr

This course introduces basic auditing concepts with extensive audit methodology including work paper preparation.

Prerequisite(s): 101-113 Accounting II.

101-131 Accounting Systems 3 cr

Student will examine the systems development life cycle including systems principles and internal controls. They will then apply these prin-

ciples and controls to various systems analysis, designs, and implementation projects.

Prerequisite(s): (101-116 Intermediate Accounting I or 101-115 Accounting III) and 101-150 Accounting Software Apps.

101-133 Acct for Govt & Nonprofit Entities 2 cr

This course introduces fund based accounting used by governmental units, non-profits, and hospitals in accordance with GAAP. This course explores the governmental fund accounting cycle and budgetary requirements; the accountability of non-profit's to donors; and the unique revenue and expense streams for hospitals, while applying the financial accounting framework and reporting for each type of entity.

Prerequisite(s): 101-113 Accounting II.

101-134 Personal Financial Planning 2 cr

This course is designed to inform students how to manage their personal finances. The learner will prepare a personal budget, plan for retirement, evaluate investment options, analyze personal risk and analyze how to mitigate that risk through the use of insurance, analyze the use of personal credit, explore the benefits of owning versus buying a home, and the benefits of proper estate planning.

101-150 Accounting Software Apps 3 cr

This course introduces students to accounting software used by small businesses. The learner will use PeachTree Complete Accounting software and QuickBooks Pro software to create and maintain accounting records and to edit and design reports and financial statements. The learner will record general ledger, receivables, payables, inventory, and payroll transactions. Note: If enrolling in an Internet section, please be advised that to complete this class at home you will be required to purchase PeachTree Complete and QuickBooks Pro. Check with your instructor so you obtain the correct version. If you live near one of our campuses, you may have access there.

Prerequisite(s): 101-111 Accounting I.

101-160 Accounting Internship 2 cr

Culminates the accounting program with 128 hours of accounting experience. Individuals participating in a work experience will have the opportunity to practice acquired skills and knowledge from the Accounting program coursework. This course is designed to help the student, instructor, and site supervisor to focus on major outcomes of the training and general readiness for employment in the accounting field.

Prerequisite(s): 101-116 Intermediate Accounting I or 101-115 Accounting III.

101-184 Business Finance & Budgeting 3 cr

This is a basic Accounting course and not intended for Accounting program majors. The learner applies the skills necessary to achieve an understanding of the fiscal/monetary aspects of business. Each learner will demonstrate application of business types, cycles, forecasting, budgeting, expense control, and financial statement interpretation relevant to the supervisor as a non-accountant.

Prerequisite(s): 101-111 Accounting I.

101-190 QuickBooks Accounting 1 cr

This class is an introduction to QuickBooks Pro software. An overview to general ledger, accounts receivable, accounts payable, inventory and payroll is covered. The student will learn how to print and customize financial statements and management reports.

10-101-1 Accounting.

101-199 Accounting-Independent Study 3 cr

Student contracts with instructor, selects topic related to program but not offered as a course or a topic not covered in depth in the program.

Course Descriptions

102-Business Administration

102-109 Software Skills for Bus Mgr 2 cr
Students will build on existing software skills to develop the expertise business managers to perform the many tasks for which a computer is the primary tool. Students will enhance their hands-on ability with current software packages that may include Word, Excel, Access, PowerPoint, and Publisher. Activities focus on using the software effectively and efficiently to address typical business management situations.

Prerequisite(s): 103-102 Microsoft Office Suite.

102-111 Human Resources, Intro to 3 cr
Topics include the nature of employee management, including recruiting, hiring, training, and developing human resources, equal employment opportunity laws, compensation, and performance appraisal.

102-112 Principles of Management 3 cr
Students learn about the four managerial functions of planning, organizing, leading, and controlling in contemporary organizations. A series of self-assessment questionnaires provide insights into personal behaviors and help students turn managerial theories into potential personal managerial practices. Students learn how management processes apply to a global environment.

102-113 Business Ethics 3 cr
Stresses ethics specifically in business and corporate social responsibility in management practices and business activities. Reviews ethical responsibilities and relationships between organizational departments, divisions, business management, and the public. In case studies and discussion groups, students weigh the pros and cons of particular courses of action that affect the individual and corporate enterprise.

102-114 Managing Operations 2 cr
Designed for mid-management careers, this course emphasizes practice of management skills. Topics covered include: strategic process management, manufacturing systems, operations strategy, product design, process technology selection, capacity planning, resource planning and scheduling, inventory control, project management and quality/productivity improvement tools and strategies.

Prerequisite(s): 101-184 Business Finance & Budgeting.

102-115 Business Mgmt Internship 1 cr
Provides the student with 80 hours of on-site experience completing managerial-type tasks in a professional office. Students may prepare training sessions, analyze budgets and prepare recommendations, draft reports, develop interview questions, screen resumes, complete project management tasks, plan special events, or perform other responsibilities typical of business managers. Students coordinate with the instructor to locate an appropriate internship site. Take during the final semester.

Prerequisite(s): 102-111 Human Resources, Intro to and 102-112 Principles of Management and 102-113 Business Ethics and 102-116 Management Decision Making. Co-requisite(s): 102-117 Planning Your Bus Mgmt Career.

102-116 Management Decision Making 3 cr
Students learn and use survey construction, Internet searching, work processing, charting, problem-solving, and decision-making skills to compile and analyze data and present recommendations for typical business situations. Prerequisite(s): 103-102 Microsoft Office Suite.

102-117 Planning Your Bus Mgmt Career 2 cr
To prepare for the business management internship, students produce all documentation related to the job-seeking process and participate in interviews. Students meet once a week during the semester with the instructor to discuss techniques for getting and keeping a job and other career-enhancing strategies. Take during the final semester.
Prerequisite(s): 102-111 Human Resources, Intro to and 102-112 Principles of Management and 102-113 Business Ethics and 102-116

Management Decision Making. Co-requisite(s): 102-115 Business Mgmt Internship.

102-130 Small Business Management 3 cr
Buying or opening a business; business planning and layout; site selection; forms of the business; personnel; bookkeeping; office records; customer credit; sales and service; promotion; legal aspects; insurance; purchasing; inventory control; relation to government; public relations with vendors, customers and employees.

102-131 Introduction to Business 3 cr
Course introduces student to the principal areas of business, including the organization of a business, the economic, industrial, and global business environment, management issues in business, ethical issues, human resource, and management motivation theories.

102-150 International Business 3 cr
Provides students with a basic understanding of the global economy and how companies do business in it. Areas of study include trends in world trade and investment, economic relationships among nations, international finance and currency exchange, government regulations and tariffs, communications and language barriers, and national customs.

102-160 Business Law 3 cr
Business Law is designed to help the student develop an understanding of the law and the relationship of the legal system to the business world. After consideration of the legal system, the course reviews contracts, sales and lease contracts, warranties, product liability, consumer law, bailments, creditors' rights, and bankruptcy.

102-182 Business Operations 3 cr
The learner assesses the role of business, its internal structure, and its relationship to the external environment. Each learner analyzes the supervisor's role in the functions of business planning, information systems, operations management, information technology, marketing and how they interact and drive business activities.

102-302 Salon Business Operations 2 cr
This course provides a comprehensive study of salon management for the cosmetology student in areas of business management. Topics of this course include: an overview of salon management/ownership responsibilities, decision making in business, business planning, and financial management.

Co-requisite(s): 502-305 Haircutting 3 and 502-324 Salon Services 4. Restricted to students admitted to the following program(s): 31-502-1 Barber-Cosmetologist.

103-Computer Software

103-102 Microsoft Office Suite 2 cr
The goal of this course is to provide an opportunity for students to use Microsoft Office 2007 as it is utilized in academic and business environments. Students will become familiar with the Office 2007 interface and use it as they work with Word, Excel, Access, and PowerPoint.

103-102A Microsoft Office Ste, Intro to 1 cr
Beginning class for people who want to learn MS Word, Excel, Access, and PowerPoint on the Windows 95 environment.

103-103 Basic Keyboarding 1 cr
Basic Keyboarding utilizes a computer software program to introduce the touch method of keyboarding. In addition to learning to use the alphabetic keys by touch, students will also learn the top row numbers and symbols as well as the numeric keypad. For open lab delivery, the course will require a limited amount of on-campus attendance.

103-104 Internet, Intro to 1 cr
A beginning course designed to introduce the student to basic Internet tools and concepts, including FTP, TELNET, WAIS, GOPHER, AR-

Course Descriptions

CHIE, VERONICA, E-MAIL, NEWSGROUPS, MAILING LISTS, and THE WORLD WIDE WEB.

103-104C e-Commerce Training 1 cr

103-106 Computer Success w/ Windows XP 2 cr

This course is for individuals with little-to-no computer experience. Here students will have an opportunity to gain knowledge in basic computer operations, terminology, hardware and software. An emphasis will be placed on file/document management. The course will also provide a foundation in using email and the internet.

103-112 Digital Photography w Window XP 1 cr

This course explores the use of digital photography, desktop scanning, file manipulation, and how to use a digital camera.

103-114 Windows 1 cr

Introduces fundamental and advanced skills necessary to utilize the newest Microsoft Windows operating system. 103-114-303 format includes instructor demonstrations of projects and procedures, instructor-led hands-on exercises, and independent lab projects. This format is especially beneficial for those students with little or no Windows 95 experience. The daytime sections of this course are self-paced.

103-120 MS Word 1 cr

Students will learn the functions of Microsoft Word and basic computer data storage and retrieval. Students will use Microsoft Word to create and modify documents such as flyers, letters, resumes and office correspondence.

103-150 PowerPoint, Introduction to 1 cr

Students will acquire skills in creating presentations using Microsoft PowerPoint. In addition to learning the basic functions, students will have opportunity to enhance their projects with color, pattern, text, motion, graphics and animation.

103-171 MS Excel 1 cr

Students will learn basic features of Microsoft Excel software which includes: formulas, functions, IF statements and the creation of charts. In addition, formatting, saving and printing of spreadsheets will be covered.

103-173 MS Access 1 cr

Students will learn to use Microsoft Access to create database tables, manage data sets, and use queries along with printing of reports. In addition, students will learn to create simple forms and reports.

104-Marketing & Merchandising Mgmt

104-102 Marketing Principles 4 cr

Marketing of products and services. Concentrates on product, price, place, promotion, market segmentation, target marketing, pricing, market research, physical distribution and distribution channels.

104-103 Strategic Marketing 1 cr

This course is designed to provide foundations for developing marketing strategy. Concepts covered include marketing principles, small business marketing, personal selling, international marketing, promotion principles, marketing research, decision making, and marketing career awareness.

104-104 Professional Selling 4 cr

Acquaints the student with qualifications and personality types needed for selling. Analyzes the basic selling steps - prospecting, preapproach, approach, presentation, handling concerns, closing and follow-up.

104-105 Marketing Research 3 cr

To create greater awareness of the process of marketing research including surveys, focus panels, sampling procedures, and the general steps in doing marketing research. Marketing decisions and problem-solving skills will be improved. Micromarketing and databases are included. Prerequisite(s): 104-102 Marketing Principles.

104-108 Retail Management 3 cr

This course will present practical information to prepare students for today's retail environment. Past practices are fully explored, as are the innovative concepts that have become part of the fashion retailer's world. Areas of study include social responsibility, purchasing domestically and off-shore, private labels and brands, pricing and inventory, customer service, visual merchandising, and management and control functions.

104-111 Consumer Behavior 3 cr

This course will address factors that influence what and why we buy. Understanding consumer behavior provides you with tools that enable you to make sure consumers will feel a need for your product, search for, and find the intended information about your product. Applying an understanding of consumer behavior will allow customers to evaluate your product as the best alternative, buy the product and remain loyal to their product.

104-115 Marketing Decision Making 3 cr

The student has the opportunity to develop their marketing decision making skills through case studies and simulations. Decision making is both individual as well as group. Students will also review goal setting, group dynamics, as well as personal leadership strategies. Students will complete many self-discovery activities and self-assessments to determine their strengths and weaknesses as this information applies to marketing decision making.

Prerequisite(s): 104-102 Marketing Principles and 196-164 Supervision of Personnel.

104-125 Promotion Principles 3 cr

Promotion principles refers to non-personal communication about product services, image, or ideas to influence customer behavior. Topics include advertising, sales promotion, visual promotion, public relations, and managing the promotion function.

Prerequisite(s): 104-102 Marketing Principles.

104-126 Advanced Promotions 3 cr

An advanced advertising course requiring the student to prepare and produce advertising campaigns utilizing concepts learned in previous advertising courses. Students form advertising agencies and take on the roles of president, account executive, research department, creative team, publishing and media department and presentation team as well as the role of the client in this hands-on practical course.

Prerequisite(s): 104-102 Marketing Principles and 104-125 Promotion Principles.

104-140 Business to Business Selling 3 cr

Emphasizes sales process including the approach, interviewing, demonstrating, negotiating, validating, and closing. The goal is detailed role playing in a 'nonretail' environment.

Prerequisite(s): 104-104 Professional Selling.

104-152 Technology in Marketing 2 cr

This course will focus on the cutting edge of technology used in marketing. Specifically we will research technology that businesses use to attract and maintain customers. In addition we will explore the technology used by marketing managers to efficiently make sound decisions related to marketing. Speakers will be brought in to demonstrate how they use the most recent technologies to search and satisfy their customers. This is a blended course; one day per week students will meet in the computer lab. The rest of the requirements for the course will be met using an online element via Blackboard. Online access is available throughout the college or you may use your home computer for access if you have an internet connection.

Prerequisite(s): 104-102 Marketing Principles and 104-125 Promotion Principles.

Course Descriptions

104-160 Entertainment/Sports/Event Mkt 3 cr

This course will help you develop and understanding of the marketing concepts and theories that apply to entertainment, sports and event marketing (ESEP) industries. The areas that this course will cover include: promotions, sponsorship, proposals and development & implementation of an entertainment and/or sports marketing plan. Students will learn how to use ESEP as a strategic platform to create publicity and brand awareness.

Prerequisite(s): 104-102 Marketing Principles and 104-125 Promotion Principles.

104-166 Enterprise Marketing & Mgmt 4 cr

Hands-on application of concepts previously learned in the marketing program while participating in an actual on-campus business. Emphasis will be placed on the nine functional areas of marketing: product/service planning, promotion, purchasing, risk management, selling, distribution, financing, marketing information management, and pricing. Competencies learned in other courses will be used to run a school-based enterprise. Students research the market, determine the proper product mix, go to market to buy products to sell, and promote to CVTC students, staff, faculty, and community. Management skills will also be applied throughout the course. Teachers and students will work jointly with other programs to control inventory, market, and keep accurate records. This applied and integrated course will act as a go-between the theories taught in the classroom and real-life situations.

Prerequisite(s): 104-102 Marketing Principles and 104-104 Professional Selling and 104-125 Promotion Principles.

104-169 Marketing Internship 3 cr

Provides hands-on experience and exposure to the real-world of marketing and will also be an invaluable tool to assist in defining students' career goals and objectives. Set-up for one hour per week of class work and an average of 8 hours per week or 128 hours per semester of actual on-the-job training. Students will be expected to work with the instructor to secure acceptable internship stations.

Prerequisite(s): 104-166 Enterprise Marketing & Mgmt. Restricted to students admitted to the following program(s): 10-104-3 Marketing Management.

104-182 Prof Development for Marketing 2 cr

This course emphasizes the Professional Development Plan (PDP), with a strong personal career focus. Students will increase their self-understanding and set specific career goals. Students will create and update career credentials that will be necessary to compete in a competitive employment market. Students will prepare a professional career portfolio that will be a strong personal sales tool for their future. In addition, the course will take an in-depth review of the job search process outlining techniques and pathways to opportunities. Must have 4th semester standing.

Prerequisite(s): 104-115 Marketing Decision Making.

104-183 Marketing Management 3 cr

The students will pull together all their learning from previous Marketing classes and apply it in a comprehensive and understandable manner. Taking a current business or starting a new business, the students in a semester-long project will work through the marketing mix, marketing research, pricing strategies, promotional strategies, organizational/management strategies, product strategies, services provided, place or distribution strategies, targeting customers, and other decisions in an extensive and inclusive project.

Prerequisite(s): 104-102 Marketing Principles and 104-105 Marketing Research and 104-125 Promotion Principles.

104-301 Salon Marketing 2 cr

Students learn the marketing skills involved in operating a salon/spa as a

business. Students evaluate merchandising displays, improve retail profits, and investigate various advertising and marketing media. Students learn retail product knowledge, promotion, selling techniques, positive customer relationships, and prescribe professional retail products to the customer.

Co-requisite(s): 502-314 Chemical Services 2 and 502-322 Salon Services 2. Restricted to students admitted to the following program(s): 31-502-1 Barber-Cosmetologist.

106-Office Systems/Technology

106-100 Website Design 3 cr

This course is designed to teach business and administrative professionals how to design, create, and maintain basic websites. We will explore major design principles surrounding website design and then use current web design software to develop an informational website.

106-101 Business Technology & Trends 2 cr

This course provides students with exposure and/or experience in using a variety of technologies used in today's office. The content focuses on understanding these technologies and how they impact office employees.

106-104 Software Specialist Practicum 2 cr

Students will gain experience in software troubleshooting, support, and training by working with Microsoft Office Suite students in an open-lab environment.

Prerequisite(s): 103-102 Microsoft Office Suite and 106-122 Document Processing and 106-164 Business Presentations & Publ or (106-139 Business Presentations and 106-107 Business Publications) and 106-142 Business Spreadsheet Applic and 106-181 Business Information Mgmt.

106-105 Business Words at Work 3 cr

The goal of this course is to develop students into successful communicators in the business office. The course will include intense drill and review of grammar, punctuation, proofreading, spelling, and capitalization. Students will properly format and compose a variety of business documents.

Prerequisite(s): 103-102 Microsoft Office Suite (or taken concurrently).

106-107 Business Publications 2 cr

This course will present basic theory and skills used in creating publications using desktop publishing techniques. Software used will include MS Word, MS Publisher, Adobe PageMaker, and Adobe PhotoShop.

Prerequisite(s): 103-102 Microsoft Office Suite.

106-110 Professional Development 2 cr

Provides training and readiness in professional growth areas of job search, career growth, business and social etiquette, business ethics, assertiveness, and oral communication skills.

Prerequisite(s): 106-105 Business Words at Work and 106-120 Business Technology Principles.

106-119 eSkillbuilding 1 cr

This course is designed for students who already possess correct keyboarding technique but need to improve their speed and accuracy. For hybrid delivery, the course will require a limited amount of on-campus attendance.

106-120 Business Technology Principles 3 cr

Emphasis on understanding computer concepts, vocabulary, and the Windows operating system. Allows the student to explore different software applications of word processing, spreadsheet, database, and multimedia functions. Provides a solid foundation in using email, Internet Web browsing, and searching.

106-122 Document Processing 3 cr

The goal of this course is to expose learners to beginning through advanced features of Microsoft Word. Students will utilize newly learned skills to produce real world business documents.

Course Descriptions

106-131 Keyboarding 2 cr	106-148 eCenter Techniques 3 cr
Students develop touch control of the keyboard and learn proper keyboarding techniques to build a straight-copy speed of 30-35 words per minute in a 3-minute timing. Course includes instruction in the formatting of letters, memos, tables, and reports using Microsoft Word.	Students will learn the importance of technology in the world of customer service. They will learn to interact internally and externally using high-level telephony, voice mail, email, Web, and other electronic support techniques.
106-132 Exploring Office Environments 2 cr	106-149 Expert Software Applications 3 cr
This course introduces various aspects of administrative professional careers. Topics explored will include career expectations and responsibilities, employment opportunities, and career planning. Students will explore the role of Administrative Professionals in industries such as contact centers, educational institutions, government agencies, insurance companies, legal firms, manufacturing corporations, medical businesses and public safety organizations. Exploration of industries will take place during off-campus events and/or on-campus presentations.	Students will build on existing software skills to develop the expertise tested in the Microsoft Office Specialist expert exam for Word, Excel, and Access. Word topics include creating styles, templates, and macros; tables of contents, captions, and cross-references in multi-page documents; forms, charts, diagrams; and collaboration techniques. Excel topics include what-if analysis, pivot tables and macros; advanced logical and financial functions; collaboration techniques, and scenario manager. Access topics include advanced queries, forms, and reports; data access pages; and macros and switchboards.
106-138 Office Internship 2 cr	Prerequisite(s): 106-122 Document Processing and 106-181 Business Information Mgmt and (106-142 Business Spreadsheet Applic or 106-125 Developing Spreadsh Solutions).
Office Internship allows students to put into practices the knowledge and skills learned from program courses. Students will share an overview of their internship experience during an end-of-semester presentation. Prerequisite(s): 106-154 Integrated Software Applic. Restricted to students admitted to the following program(s): 10-106-6 Administrative Professional.	106-151 Managing Office Projects 3 cr
106-139 Business Presentations 2 cr	This fundamental course in project management will help students learn to use and apply project management tools such as MS Project. Emphasis is on understanding an assistant's role in skillfully using project management software to aid a business in defining, planning, controlling, scheduling, and leading projects.
Students will learn PowerPoint including those features assessed in the MOS exam for PowerPoint. Focus is also on using layout and design software such as Publisher to create eye-appealing newsletters, brochures, flyers, forms, business cards, and other business publications. Must have working knowledge of Windows, mouse, and keyboarding skills.	106-154 Integrated Software Applic 2 cr
106-140 Office Procedures 3 cr	Students will have an opportunity to incorporate the features of Microsoft Word, Excel, Access, and PowerPoint to solve realistic, challenging business problems. Integration of current technology with effective business documents will allow students to expand communications beyond traditional administrative functions.
This course provides an overview of general office skills and factors that influence work effectiveness. Students will gain knowledge in general office duties, records retention and maintenance, use of office technologies, and verbal and written communication. Students will evaluate factors that influence one's ability to work effectively. Students will also prepare job search materials.	Prerequisite(s): 106-122 Document Processing and 106-142 Business Spreadsheet Applic and 106-181 Business Information Mgmt and 106-164 Business Presentations & Publ or (106-139 Business Presentations and 106-107 Business Publications).
106-141 Computer Applications-Legal 3 cr	106-158 Meeting & Event Planning 2 cr
This course provides the opportunity for the learner to develop the knowledge, skills, processes, and understanding of various types of software used in the law office, including word processing, spreadsheet, calendaring, timekeeping, and billing software.	This course focuses on preparing the learner to plan all components of a conference, coordinate business meetings, and plan successful business events. Event topics include all aspects of the event management process: goal setting and objectives, establishing and event theme, planning event logistics, facility set up, travel planning, follow-up activities, and international considerations. This course will also help students learn to use and apply project management tools such as MS Project to aid a business in defining, planning, controlling, and scheduling projects.
106-142 Business Spreadsheet Applic 3 cr	106-162 Legal Terminology 3 cr
As a student in this course, you will learn beginning to advanced features of Microsoft Excel including those assessed in the Core Microsoft Office Specialist exam. You will create, edit, and format various business spreadsheets. Topics will include formulas and functions, charts and graphics, multiple-sheet workbooks, PivotTables, PivotCharts, and database features.	Emphasis is placed on developing an understanding of legal terminology through the study of law itself and on using legal terminology in many different ways. Legal terminology covers general law terms as well as specialized legal terminology. A sound knowledge of terminology is the key foundation for anyone considering a career in the legal or business world.
106-144 Sprdsheet & Dbase Applic, Int 2 cr	106-163 Computer Success 2 cr
The goal of this course is to provide a review of basic spreadsheet and database concepts and to enhance students' knowledge with intermediate skills in both Excel and Access. Prerequisite(s): 103-102 Microsoft Office Suite.	This course is for individuals with little-to-no computer experience. Here students will have an opportunity to gain knowledge in basic computer operations, terminology, hardware, and software. An emphasis will be placed on file/document management. The course will also provide a foundation in using email and the internet. Co-requisite(s): 103-102 Microsoft Office Suite. Restricted to students admitted to the following program(s): 10-106-6 Administrative Professional.
106-146 Quality Customer Service 2 cr	
This course will provide an overview of customer service. Students will learn how exceptional customer service contributes to the overall impact and success of a business. Communication techniques and problem-solving skills critical to providing quality customer service will be examined. Key concepts include understanding and avoiding barriers to good customer service, dealing with challenging customers, and retaining customers.	

Course Descriptions

106-164 Business Presentations & Publ **3 cr**
 This course introduces design principles related to layout, graphics, and fonts. These principles will be applied in the development of effective print and digital business presentations and publications.
 Prerequisite(s): 103-102 Microsoft Office Suite.

106-166 Computer Success Fundamentals **2 cr**
 This course is for individuals with little-to-no computer experience. Students will have an opportunity to gain knowledge in basic computer operations, terminology, hardware and software but may have limited or no internet access. An emphasis will be placed on file/document management.

106-171 Adv Software Applications **3 cr**
 Students will continue their work in Office 2007 by utilizing the intermediate to advanced features of Word, Excel, and Access. Real world projects will allow students to apply these skills to actual business situations.
 Prerequisite(s): 103-102 Microsoft Office Suite.

106-172 Office Communication **2 cr**
 This course will provide experience in the use of communication and collaboration tools such as Outlook and SharePoint. Time will also be spent researching various communication tools currently used in business such as video conferencing. Students will improve their communication skills using these and other tools.

106-173 Web Technologies **3 cr**
 This course provides students with a basic understanding of various tools used to create web pages, wikis, and blogs. Other social and business web tools will be explored.

106-174 Business Software Solutions **3 cr**
 Students will use previously learned software skills to successfully complete business-related problems and scenarios.
 Prerequisite(s): 106-164 Business Presentations & Publ and 106-171 Adv Software Applications.

106-175 Admn Professional Development **2 cr**
 This course will examine aspects of expected business protocol/professionalism along with current trends and topics. This course will also provide students with an opportunity to refine job search materials and prepare for job interviews.
 Prerequisite(s): 106-101 Business Technology & Trends and 106-158 Meeting & Event Planning and 106-173 Web Technologies and 106-174 Business Software Solutions. Co-requisite(s): 106-138 Office Internship. Restricted to students admitted to the following program(s): 10-106-6 Administrative Professional.

106-181 Business Information Mgmt **3 cr**
 The goal of this course is to expose learners to electronic information management systems. As a student in this course, you will learn beginning to advanced features of Microsoft Access. The projects in this class will give students an opportunity to manage information in a simulated business environment.

106-188 Managing Office Finances **3 cr**
 Students will learn fundamental accounting terminology and practices. They will analyze, document, and input business transactions in a manual and computerized accounting office environment.

106-197 Ind Study, Administrative Asst **3 cr**
 Independent learning in special areas of office systems/technology courses in order for students to complete program requirements.
 Prerequisite(s): consent of sponsoring instructor.

107-Computer Information Systems

107-102 Computer Technology **3 cr**
 This course provides a practical overview of computer technology in a

user-friendly format. The course is targeted for students outside of the Computer Information Systems program who want to strengthen their understanding of computer technology. Skills and concepts learned will help students to be more effective computer users in the medical field, marketing, manufacturing, or whatever career path they have chosen. Subjects covered will include computer hardware and software, security considerations, computer networking, the Internet, and eCommerce.

107-103 Project Mgmt with Technology **3 cr**
 This course provides students with experience in using technology to manage projects. Using a variety of online tools, students will practice project management techniques and explore the impact that effective presentations, training, documentation, and user support have on project implementation.

107-104 Database Management **2 cr**
 This course uses hands-on exercises and projects to give students experience with using databases for health-related data storage and retrieval. To encourage students to become more sophisticated database users, background information, general relational database design concepts, and a database security overview are included.

107-123 Computer & Oper Sys Concepts **3 cr**
 Provides a strong foundation in computer concepts and operating systems. Through lecture, demonstration, and lab exercises, students learn operating system concepts, file management, various DOS commands, Windows, and computer hardware.

109-Hospitality

109-100 Hospitality Industry, Intro to **2 cr**
 Will introduce you to the many facets of the hotel and restaurant management industry and help you explore those that interest you. Computer literacy required.

109-101 Food Service Equip Fundamental **4 cr**
 This lab class explores commercial food service equipment while utilizing basic formulas and recipes as experiments. Hospitality equipment is practiced giving students a hands-on approach to various systems found in a restaurant. Front of the house experience is gained within the deli/snack bar operation.

109-108 Hospitality-Customer/Empl Rel **3 cr**
 Stresses the importance of customer satisfaction and providing hospitality as well as service.

109-114 Tourism, Intro to **2 cr**
 Social impacts of tourism, destination development, travel, transportation, and cultural diversity.

109-115 Travel Operations **3 cr**
 Comprehensive look at the functions of the suppliers, carriers, and travel intermediaries (agents, tour operators, etc.) within the Hospitality and Travel industry. Includes planning an actual travel function.

109-117 Catering Off Premise **3 cr**
 Students will explore various management techniques used in the Hospitality industry while actually catering a medium-size function off premises. The details and preparation of catered events with concentration on purchasing supplies, menu planning management, the use of catering equipment, and the transportation requirements needed to implement a successful function.
 Prerequisite(s): 109-101 Food Service Equip Fundamental and 109-152 Sanitation & Safety Fundmentls.

109-120 Restaurant Operations Mgmt **5 cr**
 In an actual restaurant kitchen/lab, students produce different styles of menu items which are served to the public. Various food production equipment is utilized in the process. Students plan and create menus, purchase supplies, and formulate recipes in the Valley Rose Restaurant.

Course Descriptions

Each student has the opportunity to control the production staff and participate with the dining room services class.

Prerequisite(s): 109-101 Food Service Equip Fundamental and 109-152 Sanitation & Safety Fundmntls. Co-requisite(s): 109-181 Dining Room Service.

109-131 Hospitality Purch & Cost Contr 3 cr

Purchasing and cost control procedures are explored using inventory, ordering, menu planning, and labor cost control techniques. Students will examine various purchasing specifications and the means to obtain a profitable P & L statement.

Prerequisite(s): 804-106 Intro to College Math (or taken concurrently).

109-134 Hospitality Supervision 3 cr

Students focus on leadership styles and motivational techniques; training, job descriptions, and performance standards; hiring and evaluation; legal requirements.

109-135 Meeting & Special Events Plng 3 cr

Learners will gain a broad perspective of the special event segment of the Hospitality and Tourism industry as well as special event planning. Emphasis is placed on the basic skills and framework for producing successful banquets, conventions, meetings, and expositions.

109-136 Hospitality Law 3 cr

Focuses on the legal aspects of the industry. The employers, guests, and employees' responsibilities, liabilities, and rights are examined as they affect each of the others.

109-141 Hotel-Restaurant Mgmt Seminar 2 cr

Development of work related skills including resume development, time management, ethics and professionalism, conflict management, problem solving, stress management, and basic management functions.

Co-requisite(s): 109-192 Hotel & Restaurant Internship. Restricted to students admitted to the following program(s): 10-109-2 Hotel and Restaurant Mgmt.

109-144 Hospitality Promotion 3 cr

Basic marketing concepts, determination of market segments, and promotional techniques.

109-152 Sanitation & Safety Fundmntls 1 cr

Includes the National Certification for Sanitation as well as the issues of personal and customer safety.

109-160 Beverage Merchandising 2 cr

Bartender awareness, how alcoholic beverages differ, bar set-up, alcoholic alternatives, current and past trends in marketing alcoholic beverages.

109-171 Hotel Operations 3 cr

Practice and theory in the following hotel areas: housekeeping, security, staffing and scheduling, guest relations, processes and procedures at the front desk, night audit and hotel accounting.

109-181 Dining Room Service 3 cr

Provides a hands-on opportunity to learn the management of a restaurant. Students will operate the Valley Rose Restaurant.

Prerequisite(s): 109-152 Sanitation & Safety Fundmntls. Co-requisite(s): 109-120 Restaurant Operations Mgmt.

109-192 Hotel & Restaurant Internship 2 cr

Students will work 144 hours in the hospitality industry to complete on-the-job training, work analysis, employment exploration, and industry comparisons.

Co-requisite(s): 109-141 Hotel-Restaurant Mgmt Seminar. Restricted to students admitted to the following program(s): 10-109-2 Hotel and Restaurant Mgmt.

109-197 Opportunities in Hosp. Mgmt. 3 cr

Independent study course in which student contracts with the instructor; study of topics related to the program but not covered in depth in another course.

110-Paralegal

110-101 Paralegal & Legal Ethic, Intro 3 cr

An introduction to the legal profession, the courts, legal ethics, legal terminology, research, and the role of paralegals.

Restricted to students admitted to the following program(s): TC-110-1 Paralegal Post-Baccalaureate, 10-110-1 Paralegal.

110-102 Civil Litigation I 3 cr

The initial procedures associated with the preliminary stages of civil litigation, including pleadings, discovery, and motions.

Restricted to students admitted to the following program(s): TC-110-1 Paralegal Post-Baccalaureate, 10-110-1 Paralegal.

110-103 Civil Litigation II 3 cr

This course demonstrates the substantive law, process and procedure, and typical recurring tasks relating the post-pleadings stages of civil litigation. These include evidence, discovery (depositions, interrogatories, physical and mental exams, requests for admissions) methods of case resolution (judgment, settlement, dismissal, and alternative disputes, and requests for admissions) trial practice, post-trial and post-judgment matters, and appellate procedure.

Prerequisite(s): 110-102 Civil Litigation I and 110-104 Legal Research and (801-106 English Composition or 801-136 English Composition 1 or 801-219 English Composition 1 or Bachelor's Arts Y or Bachelor's Science Y). Restricted to students admitted to the following program(s): 10-110-1 Paralegal, TC-110-1 Paralegal Post-Baccalaureate.

110-104 Legal Research 3 cr

An application of legal research techniques, using traditional and computer-assisted resources.

Restricted to students admitted to the following program(s): TC-110-1 Paralegal Post-Baccalaureate, 10-110-1 Paralegal.

110-105 Legal Writing 3 cr

An advanced writing course concentrating on legal correspondence, forms, memoranda, and briefs.

Prerequisite(s): 110-102 Civil Litigation I and 110-104 Legal Research and (801-106 English Composition or 801-136 English Composition 1 or 801-219 English Composition 1 or Bachelor's Arts Y or Bachelor's Science Y). Restricted to students admitted to the following program(s): TC-110-1 Paralegal Post-Baccalaureate, 10-110-1 Paralegal.

110-106 Family Law 3 cr

Basic legal concepts in the area of family relations, including premarital agreements, parental rights, and divorce.

Prerequisite(s): 110-102 Civil Litigation I and 110-104 Legal Research and (801-106 English Composition or 801-136 English Composition 1 or 801-219 English Composition 1 or Bachelor's Arts Y or Bachelor's Science Y). Restricted to students admitted to the following program(s): 10-110-1 Paralegal, TC-110-1 Paralegal Post-Baccalaureate.

110-107 Legal Aspects of Bus Organiz 3 cr

Legal aspects involved in the formation, operation, and dissolution of the principal types of business organizations.

Prerequisite(s): 110-103 Civil Litigation II or (801-136 English Composition 1 or 801-219 English Composition 1 or Bachelor's Arts Y or Bachelor's Science Y). Restricted to students admitted to the following program(s): 10-110-1 Paralegal, TC-110-1 Paralegal Post-Baccalaureate.

110-110 Real Estate Law 3 cr

Drafting real estate descriptions, listing contracts, offers to purchase, deeds, land contracts, mortgages, foreclosure pleadings, transfer tax returns, and leases. Prerequisite(s): (110-102 Civil Litigation I and 110-104 Legal Research) and (801-136 English Composition 1 or 801-219 English Composition 1 or Bachelor's Arts Y or Bachelor's Science Y). Restricted to students admitted to the following program(s): TC-110-1 Paralegal Post-Baccalaureate, 10-110-1 Paralegal.

Course Descriptions

110-114 Administration of Estates

3 cr

Basic legal concepts of intestacy and testacy, including probate forms and procedures.

Prerequisite(s): 110-103 Civil Litigation II and (801-136 English Composition 1 or 801-219 English Composition 1) or (Bachelor's Arts Y or Bachelor's Science Y). Restricted to students admitted to the following program(s): 10-110-1 Paralegal, TC-110-1 Paralegal Post-Baccalaureate.

110-115 Administrative Law

3 cr

The creation and interpretation of administrative rules and regulations as well as the adjudication of administrative cases, including workers' compensation and Social Security disability laws.

Prerequisite(s): 110-102 Civil Litigation I and 110-104 Legal Research and (801-136 English Composition 1 or 801-219 English Composition 1 or Bachelor's Arts Y or Bachelor's Science Y). Restricted to students admitted to the following program(s): TC-110-1 Paralegal Post-Baccalaureate, 10-110-1 Paralegal.

110-122 Debtor and Creditor Relations

3 cr

A review of legal issues involving debtors, creditors, and third parties.

Prerequisite(s): 110-102 Civil Litigation I and 110-104 Legal Research and (801-136 English Composition 1 or 801-219 English Composition 1 or Bachelor's Arts Y or Bachelor's Science Y). Restricted to students admitted to the following program(s): TC-110-1 Paralegal Post-Baccalaureate, 10-110-1 Paralegal.

110-142 Paralegal Internship

3 cr

Students gain practical experience working in a legal environment under the supervision of an attorney or other qualified professional for a minimum of 144 hours. In addition, students meet one hour weekly to discuss legal office experiences and ethical considerations, learn effective job search techniques, and develop professional image.

Prerequisite(s): 110-101 Paralegal & Legal Ethic, Intro and 110-102 Civil Litigation I and 110-103 Civil Litigation II and 110-105 Legal Writing and (110-114 Administration of Estates or 110-168 Criminal Law-Paralegal or 110-180 Elder Law) and (801-136 English Composition 1 or 801-219 English Composition 1 or Bachelor's Arts Y or Bachelor's Science Y). Restricted to students admitted to the following program(s): 10-110-1 Paralegal, TC-110-1 Paralegal Post-Baccalaureate.

110-143 Paralegal Field Study

3 cr

Students engage in a field study of a specialty legal practice area in lieu of completing a paralegal internship. Students work with an advisor to identify an area of legal specialty study and to plan an appropriate field study. The field study includes reading textbooks and legal literature, interviewing practicing attorneys and paralegals working in the specialty area, and preparing a report and presentation.

Prerequisite(s): 110-101 Paralegal & Legal Ethic, Intro and 110-102 Civil Litigation I and 110-104 Legal Research and 110-103 Civil Litigation II and 110-105 Legal Writing and (110-114 Administration of Estates or 110-168 Criminal Law-Paralegal or 110-180 Elder Law) and (801-136 English Composition 1 or 801-219 English Composition 1 or Bachelor's Arts Y or Bachelor's Science Y). Restricted to students admitted to the following program(s): 10-110-1 Paralegal, TC-110-1 Paralegal Post-Baccalaureate.

110-147 Immigration Law

3 cr

This course introduces the student to the basic law and legal concepts involved in the immigration and naturalization process. This includes entry of aliens into the United States and permanent residence based upon an offer of employment or family relationship. Additional areas of law discussed in this course will include problems individuals face with political asylum, deportation and exclusion.

Prerequisite(s): 110-102 Civil Litigation I and 110-104 Legal Research and (801-136 English Composition 1 or 801-219 English Composition 1)

or (Bachelor's Arts Y or Bachelor's Science Y). Restricted to students admitted to the following program(s): 10-110-1 Paralegal, TC-110-1 Paralegal Post-Baccalaureate.

110-160 Employment Law

3 cr

Analysis of federal and state laws governing employment relationships. Prerequisite(s): (110-102 Civil Litigation I and 110-104 Legal Research) and (801-136 English Composition 1 or 801-219 English Composition 1) or (Bachelor's Arts Y or Bachelor's Science Y). Restricted to students admitted to the following program(s): TC-110-1 Paralegal Post-Baccalaureate, 10-110-1 Paralegal.

110-168 Criminal Law-Paralegal

3 cr

Analysis of federal and state laws governing employment relationships. Prerequisite(s): 110-103 Civil Litigation II and (801-136 English Composition 1 or 801-219 English Composition 1) or (Bachelor's Arts Y or Bachelor's Science Y). Restricted to students admitted to the following program(s): 10-110-1 Paralegal, TC-110-1 Paralegal Post-Baccalaureate.

110-170 Contract Law

3 cr

A course involving the formation, interpretation, and drafting of contracts.

Prerequisite(s): 110-102 Civil Litigation I and 110-104 Legal Research and (801-136 English Composition 1 or 801-219 English Composition 1 or Bachelor's Science Y or Bachelor's Arts Y). Restricted to students admitted to the following program(s): TC-110-1 Paralegal Post-Baccalaureate, 10-110-1 Paralegal.

110-180 Elder Law

3 cr

Elder Law is an introduction to the topics in the law affecting older persons. Topics covered include family rights and responsibilities, health care decision-making, financing health care (Medicare, Medicaid); housing, guardianship and alternatives to guardianship, income maintenance (social security benefits, pensions, etc.), elder abuse and ethical issues in dealing with older clients.

Prerequisite(s): 110-102 Civil Litigation I and 110-104 Legal Research and (801-136 English Composition 1 or 801-219 English Composition 1 or Bachelor's Arts Y or Bachelor's Science Y). Restricted to students admitted to the following program(s): TC-110-1 Paralegal Post-Baccalaureate, 10-110-1 Paralegal.

145-Small Business

145-102 Creating a Business Plan

3 cr

Students will develop, research, and write a detailed business plan that can be presented to potential funders and investors and used to create successful businesses.

150-CIS - Network Communications

150-100 Exploring Computer Networking

1 cr

In this course, students will explore the field of computer networking. All course topics are at an introductory level and include computer construction, operating systems, cable-making, peer-to-peer and client/server networks, routing, wireless networks, security, virus/popup/spam prevention, and Internet servers. Students will tour an enterprise-level commercial network installation. The final project for the course will be an interactive network application involving the whole class. Prerequisite: a basic knowledge of computer usage and an interest in how computers and networks operate.

150-101 PC, Networkg & Security Basics

2 cr

This course will introduce the learner to basic PC operational concepts, operating system installation procedures, small office/home office (SOHO) PC networking concepts, local and network printing proce-

Course Descriptions

dures, data protection and PC security focused on the curtailment of adware, spyware, and virus issues. This course is web enhanced through our Blackboard course management system and will require the learner to have access to an Internet connected PC for coursework and research between classroom sessions.

150-120 Network Diagramming 1 cr

In this course, students receive hands-on training utilizing an industry-standard computer software program to document network design, layout, and architecture. Topics include the design and documentation of local area networks (LANs), wide area networks (WANs), and all popular internetworking devices.

150-121 Network Design, Instill & Tblsh 3 cr

This course promotes a structured approach to the principles and practices involved with the planning, design, installation, implementation, testing, supporting, and troubleshooting of local and wide area networks. Training includes real-world business scenarios.

Prerequisite(s): 150-153 Cisco 3: LAN Switch & Wireless and 150-180 Adv Network Oper Systems 1.

150-123 IT Networking Concepts 3 cr

This course will provide strong foundational concepts that will enhance the student's understanding of workstation hardware fundamentals, operating systems fundamentals, and networking fundamentals. Through instructor lead discussions, demonstrations, and lab exercises the student will learn about the function of devices located within a workstation, learn about the devices and services that are needed for a network to function, learn how to install and configure operating systems and how to perform file management tasks in both a GUI and command line interface environments.

150-150 Cisco 1: Network Fundamentals 3 cr

This is the first of four courses leading to the Cisco Certified Network Associate (CCNA) certification. The goal of this course is to introduce the student to fundamental networking concepts and technologies. Students will be introduced to the two major models used to plan and implement networks: Open System Interconnection (OSI) and Transmission Control Protocol/Internet Protocol (TCP/IP). Students will gain an understanding of the "layered" approach to networks and examine the OSI and TCP/IP layers in detail to understand their functions and services. Students will become familiar with networking terminology, network topologies, physical and logical addressing, IP address subnetting techniques, Ethernet standards, network media installation standards and testing, and the function and basic configuration of network devices such as switches and routers.

150-151 Cisco 2: Routing Protocol/Conc 3 cr

This is the second of four courses leading to the Cisco Certified Network Associate (CCNA) certification. The primary focus of this course is on routing and routing protocols. This is to develop an understanding of how a router learns about remote networks and determines the best path to those networks. This course includes both static routing and dynamic routing protocols. Students will develop skills on how to create basic internetworks, configure routers, manage Cisco IOS software, and configure the major dynamic routing protocols. Advanced IP addressing topics including Variable Length Subnet Masking (VLSM) and Classless Interdomain Routing (CIDR) are also covered.

Prerequisite(s): 150-150 Cisco 1: Network Fundamentals.

150-153 Cisco 3: LAN Switch & Wireless 2 cr

This is the third of four courses leading to the Cisco Certified Network Associate (CCNA) certification. The goal of this course is to develop an understanding of how switches are interconnected and configured to provide network access to Local Area Network (LAN) users. Students will develop an understanding of how a switch communicates with other

switches and routers in a small or medium-sized business network to implement Virtual LAN (VLAN) segmentation. This course focuses on Layer 2 switching protocols and concepts used to improve redundancy, propagate VLAN information, and secure the portion of the network where most users access network services. In addition, this course also covers the basic concepts of how to integrate wireless devices into a wired LAN.

Prerequisite(s): 150-151 Cisco 2: Routing Protocol/Conc.

150-154 Cisco 4: Accessing the WAN 2 cr

This is the last of four courses leading to the Cisco Certified Network Associate (CCNA) certification. The goal of this course is to develop an understanding of various Wide Area Network (WAN) technologies to connect small- to medium-sized business networks. The course introduces WAN converged applications and Quality of Service (QoS). It focuses on WAN technologies including Point-to-Point Protocol (PPP), Frame Relay, and broadband links. WAN security concepts are discussed in detail, including types of threats, how to analyze network vulnerabilities, general methods for mitigating common security threats and types of security appliances and applications. The course then explains the principles of traffic control and access control lists (ACLs) and describes how to implement IP addressing services for an Enterprise network, including how to configure Network Address Translation (NAT) and Dynamic Host Configuration Protocol (DHCP). IPv6 addressing concepts are also discussed.

Prerequisite(s): 150-153 Cisco 3: LAN Switch & Wireless.

150-155 IT Management Concepts 2 cr

This course will provide the learner with a number of skills that are required to support end users of Information Technology hardware and software. This course will provide an overview of the functions/services provided by a help desk, develop customer support skills such as effective communication, model value-added end-user training sessions, and demonstrate effective trouble-shooting techniques. In addition this course will review current trends/technology in IT, research possible careers in IT, and help students develop job search materials such as resumes, cover letters, and portfolios specifically designed for IT positions. The learner will acquire these necessary skills through class discussions, research projects, written assignments, interviews, guest speakers, and real-world scenarios.

Prerequisite(s): 150-120 Network Diagramming and 150-165 Microsoft Windows Network Adm.

150-160 Network Directory Services 3 cr

Utilizing a hands-on format, this course will provide learners the foundational concepts and configuration skills necessary for the implementation, management and support of network operating systems based on Directory Service technology. Students will learn about the function and management of the Lightweight Directory Access Protocol (LDAP) database and the importance that LDAP plays within Directory Services. Specific topics include objects, naming conventions, and addressing common to Directory Services such as Active Directory, eDirectory, and NIS. Students will learn and practice important skills such as how to utilize the appropriate management techniques in each of the Directory Services to configure user information, login restrictions, security functions and the automation of the user creation process as well as other scripted administrative tasks.

Prerequisite(s): 150-150 Cisco 1: Network Fundamentals and (150-123 IT Networking Concepts or 107-123 Computer & Oper Sys Concepts). Restricted to students admitted to the following program(s): 10-150-2 IT-Network Specialist.

150-162 Network Administration 3 cr

This hands-on course will demonstrate how to accomplish daily network

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administration tasks. Students will learn how to configure clients, how to create and manage user accounts, how to implement file and print services, and how to configure network security.

Prerequisite(s): 150-123 IT Networking Concepts and 150-150 Cisco 1: Network Fundamentals.

150-165 Microsoft Windows Network Adm 3 cr

This course is intended for those who need to support and/or administer various Microsoft Windows operating systems in a networked environment, including local and domain management of accounts, policies, disk resources, printers, profiles, configurations, as well as all essential networking services (DHCP, DNS and Active Directory) to support local, domain and Internet functionality. The course provides students with the knowledge and skills necessary to perform post-installation and day-to-day administration tasks in a work group or domain based client/server network environment. Prerequisites can be fulfilled with equivalent work experience.

Prerequisite(s): 150-123 IT Networking Concepts and 150-150 Cisco 1: Network Fundamentals.

150-175 Unix System Administration 3 cr

In this course, students will learn the process of installing and configuring the Unix operating system for single- and multi-user, stand-alone, and networked operation. Startup and shutdown, backup and recovery, file system maintenance, account and process management, networking, and software installation.

Prerequisite(s): 150-123 IT Networking Concepts and 150-150 Cisco 1: Network Fundamentals.

150-180 Adv Network Oper Systems 1 3 cr

This course will provide the learner with the ability to manage servers and network services utilizing a variety of network operating systems common in today's IT environment. This course will provide the learner with the skills necessary to install, configure, and manage servers and network services based on Novell, Unix, and Windows network operating systems. In this course the learner will study how to install servers and how to implement hardware unique to server installations to improve fault tolerance. The learner will acquire the skills needed to configure and manage basic network services such as directory services, DHCP, DNS, FTP, and Web services. The learner will master these skills through interactive lectures, class discussions, product demonstrations, and hands-on lab activities.

Prerequisite(s): (150-162 Netware Administration or 107-162 NetWare Administration) and (150-165 Microsoft Windows Network Adm or 107-165 Microsoft Windows Network Adm) and (150-175 Unix System Administration or 107-175 Unix System Administration) and 150-151 Cisco 2: Routing Protocol/Conc.

150-181 Adv Network Oper Systems 2 3 cr

This advanced course will provide the learner with the ability to manage high-level network services hosted by servers that integrate a variety of network operation systems found in today's WAN/LAN environments.

This course will provide the learner with the skills necessary to maintain advanced network services based on major network operations systems used in network security, disaster recovery, network management tools, communication services, network device configuration, and content management. The learner will master these skills through interactive lectures, class discussions, product demonstrations, and lab-based scenarios. Students completing the course will be prepared to take the CompTIA Network + certification exam at the end of the course. Course fee includes the cost for a single attempt of the Network + exam.

Prerequisite(s): 150-180 Adv Network Oper Systems 1 and 150-153 Cisco 3: LAN Switch & Wireless.

150-182 Network Specialist Internship 2 cr

The purpose of this course is for the learner to obtain real-world experience by working within an IT Department for a local business or organization. Students must first obtain permission from the Director of Network Specialist Internship before enrolling in this course. The Director will coordinate the student's internship with the IT Administrator/Manager of a local business or local organization. Compensation for the internship is to be negotiated between the student and the employer. Restricted to students admitted to the following program(s): 10-150-2 IT-Network Specialist.

150-183 Wireless Networking 2 cr

This course in an introduction to wireless local area networks (WLANs). Students will develop, implement, and troubleshoot wireless networks. Students will acquire competencies in wireless technologies, security, and network design practices. Course topics include WLAN setup and troubleshooting. 802.11a, 802.11b, 802.11g, and 802.11n technologies, products and solutions, site surveys, resilient WLAN design, installation and configuration, WLAN security, and vendor interoperability strategies. The course will be delivered via a combination of lecture/discussion and hands-on application laboratory.

Prerequisite(s): 150-151 Cisco 2: Routing Protocol/Conc or 605-109 Industrial Computer Technology.

150-184 Network Security 2 cr

This course will utilize a hands-on approach to teach students to design and implement network security solutions that will reduce the risk of revenue loss and vulnerability. Topics include overall security processes, security policy design and management, security technologies, products and solutions, firewall and secure router design, installation, configuration, and maintenance.

Prerequisite(s): 150-153 Cisco 3: LAN Switch & Wireless and 150-180 Adv Network Oper Systems 1.

150-190 CCNA Exam Preparation 1 cr

This course is an intense review of the knowledge and skills necessary to pass the Cisco Certified Network Associate certification exam. The course covers topics on extending switched networks with VLANs, determining IP routes, managing IP traffic with Access Control Lists, and establishing Point-to-Point and Frame Relay connections. Prior to attending this course, students should be familiar with networking topics such as TCP/IP, router and switch configuration, peer-to-peer networking, subnetting, routing protocols, application layer protocols, and networking standards and architecture. At the conclusion of this course, students may schedule their CCNA exam with the VUE or Prometric testing center of their choice. Interested individuals who possess a general networking background, have prior experience with Cisco IOS, and are seeking CCNA certification should consider this class as the quickest way to prepare for the requirements of the CCNA exam.

152-IT Network/Intranet (Web)

152-101 Programming Fund - JavaScript 3 cr

This course is designed to be a student's first programming course. It provides an introduction to fundamental computer programming concepts including: input-processing-output, if-then-else logic, for loops, while loops, and array processing. With an emphasis on hands-on activities, students use pseudo code and flowcharting tools to build problem-solving skills. Programming concepts and problem-solving skills are synergized and applied through the completion of a variety of programming exercises using the Javascript programming language.

Restricted to students admitted to the following program(s): 10-152-1 IT-Programmer/Analyst.

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152-102 IT-Programr Analyst Exploration 1 cr
This is an introductory course that explores programming concepts, examines career possibilities for graduates of the Programmer Analyst degree, and looks at current and future trends of the information technology industry.

152-103 .NET-VB 3 cr
This course builds on the foundation of programming Fundamentals with VB.NET. In this course you will explore database usage using ADO. NET, develop subs and functions, develop objects and classes, and incorporate other techniques not covered in the Programming Fundamentals course. This course will require you to create an application that will be presented at the end of the semester.

Prerequisite(s): 152-101 Programming Fund - JavaScript.

152-104 Object Oriented Design w UML 2 cr
This course provides an overview of the use of Unified Modeling Language and object oriented design concepts. Students will apply UML and practice object oriented design principles in software development exercises and projects.

Prerequisite(s): 152-103 .NET-VB and 152-108 Web 2-JavaScript & PHP.

152-105 .NET-ASP 3 cr
In this course you will explore the realm of ASP.NET, which is the web application development tool for .NET. You will be introduced to ASP.NET fundamentals and explore the differences between programming in VB.NET and ASP.NET. You will be required to create a web-based application that will be presented at the end of the semester.

Prerequisite(s): 152-103 .NET-VB.

152-106 Operating Systems 2 cr
Provides a strong foundation in computer concepts and operating systems directed to Programmer Analyst/Web Developer professionals. Through lecture, demonstration, and lab exercises, students learn operating system concepts, file management, various DOS commands, UNIX commands, Windows, and computer hardware.

Restricted to students admitted to the following program(s): 10-152-1 IT-Programmer/Analyst.

152-107 Web 1-HTML & CSS 3 cr
Create dynamic Web pages using XHTML and Cascading Style Sheets (CSS). Basic knowledge of the Internet recommended. An online offering of this course is available.

Restricted to students admitted to the following program(s): 10-152-1 IT-Programmer/Analyst.

152-108 Web 2-JavaScript & PHP 3 cr
This course will include a study of creating dynamic web applications using client-side JavaScript and the server-side PHP environment. Prerequisite(s): 152-101 Programming Fund - JavaScript and (152-107 Web 1-HTML & CSS or 107-107 Web Programming I).

152-109 Software Design Patterns 3 cr
This course is designed to provide the student with the next step in Web development after XHTML. This course is a hybrid course, where we will meet in class at least half of the time. The remainder is online. XML-eXtensible Markup Language is the foundation for B2B (business-to-business) commerce. XHTML is limited to the presentation of how information looks on the computer screen. XML is used to facilitate the manipulation of the document, information, text, and data contained within the document. AJAX is used to present dynamic content to a browser asynchronously. The format of this course is lecture with extensive labs to apply XML principles to database information for the Internet.

Prerequisite(s): (107-108 Web Programming II or 152-108 Web 2-JavaScript & PHP) and (107-136 Database Design or 152-136 Database 2).

Restricted to students admitted to the following program(s): 10-152-1 IT-Programmer/Analyst.

152-110 eBusiness Fundamentals 2 cr
eBusiness Fundamentals is the study of current trends in the use of Internet technologies as a tool for business development. Some of the topics covered include the relationship of Electronic Data Interchange to eCommerce and eBusiness, promoting a firm's website to online search services, and Internet security technologies.

152-112 Business Intelligence 3 cr
This course introduces students to the concepts of Business Intelligence (BI) with an emphasis on report development. Beginning with an overview of basic business practices, students develop an appreciation for the importance of good business decision-making strategies - and the information systems that can impact those strategies. As business intelligence concepts (report-writing, knowledge management, data warehouse, data mining, olap) are investigated, students apply those concepts through hands-on activities with one or more industry-standard BI/reporting tools (SQL Server Reporting Tools and/or Crystal Reports).

Prerequisite(s): 152-132 Database 1 and 152-103 .NET-VB (or taken concurrently).

152-117 User Interface Design 2 cr
The design of the user interface can make or break a website or application. This course helps students develop an appreciation for the user experience by investigating and applying user-centered design techniques. Students will learn to identify and incorporate attributes of successful user interfaces through hands-on activities that include user interface critiques and user interface design and development projects.

152-125 Information Architecture 3 cr
This course helps a student prepare for an Information Technology career as a Programmer/Analyst or Systems Analyst. This course is critical to help the student develop skill sets to interact and be successful with non-technical people in an organization. The course emphasizes the systems development life cycles using classical and structured methodology for analysis, design, documentation, input/output design, file design, process flow, and system and program specifications.

152-126 Agile Programming 3 cr
Agile Development consists of the planning, implementation, and delivery phases of a software product using coding standards, testing and continuous integration. This course will use aspects of Scrum (developed by Ken Schwaber and Jeff Sutherland) to facilitate and manage student projects using a software approach. This involves planning and estimating, charting progress, testing, programming/developing intermediate solutions, and delivering the final product. Projects chosen for this course will be based on authentic situations encountered by real businesses as much as possible.

152-128 Perl Programming 3 cr
In this course the student will learn to develop more advanced computer programs in the Perl programming language. Perl is used in many ways: web development, system administration, and general purpose applications, to name a few. Intermediate topics including arrays and hashes, regular expressions, CGI programming, and manipulating files and directories will be covered. Basic programming topics will also be reviewed. Prerequisite(s): 152-101 Programming Fund - JavaScript.

152-129 Java Web Programming 3 cr
Students will write programs using the latest Sun Java release. The focus of the class is on the use of advanced Java features necessary for real world business applications. The class will review and extend knowledge of Java; namely, Input/Output, Exception classes and packages. New material emphasized will include Collections, JDBC, Servlets and Java Server Pages.

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Prerequisite(s): 152-142 OO Analysis & Design-Java or 107-142 Java Programming I.

152-130 Ruby on Rails 3 cr

In this course the student will learn the Ruby programming skills and Rails techniques used to build Ruby on Rails applications in a Rapid Application Development (RAD) environment.

Prerequisite(s): 152-101 Programming Fund - JavaScript and 152-107 Web 1-HTML & CSS and 152-132 Database 1 or 107-107 Web Programming I or 107-132 Database Applic Development.

152-132 Database 1 3 cr

This course introduces students to SQL (Structured Query Language). Through hands-on activities in and outside the classroom, students practice using SQL to create, populate, manipulate, and query multi-table relational databases. Relational concepts, such as relation table rules and relational algebra, are reviewed and applied as students work with SQL both interactively and in scripts, and in both MySQL and Oracle environments.

Prerequisite(s): 152-101 Programming Fund - JavaScript (or taken concurrently). Restricted to students admitted to the following program(s): 10-152-1 IT-Programmer/Analyst.

152-133 Visual Basic.NET, Intro to 1 cr

Develop visual basic programs by creating the user interface (a window), setting properties, and writing the program code. Programs will involve forms, controls, menus, dialogs, and drop-and-drag events. Some programming experience helpful.

152-136 Database 2 3 cr

In this course students discover how databases are designed and used. Students practice database design methodologies, tools, and techniques via hands-on assignments and classroom exercises covering data normalization, Entity-Relationship Diagrams, and Relational data modeling. In addition, Visio and MS Access are software tools used to give students practical experience with the creation, documentation, and testing of their relational database designs.

Prerequisite(s): 152-132 Database 1.

152-142 OO Analysis & Design-Java 3 cr

This course is designed for a first course in Java. Students will learn to create Java classes and write their own methods. Basic programming skills, such as decision-making, looping, string manipulation, and arrays are covered. The second half of the course explores advanced topics, such as inheritance, graphics, exception handling, and file processing.

Prerequisite(s): 152-101 Programming Fund - JavaScript.

152-143 Information Technology Capstone 2 cr

This course brings skills learned in previous IT Programmer/Analyst courses together in a team-based business environment. Student teams will work through the life-cycle of a programming application project that covers requirements gathering through the production phase. Students will bring various technologies together to complete their applications in an efficient manner.

Prerequisite(s): (152-125 Information Architecture or 107-125 Information Architecture) and (152-132 Database 1 or 107-132 Database Applic Development) and (152-105 .NET-ASP or 152-142 OO Analysis & Design-Java or 107-142 Java Programming I or 152-164 Web 3 or 107-164 Data Mining Concepts).

152-151 Mobile Application Development 3 cr

In this course, students will learn to design and construct programs/applications for mobile devices such as the iPhone, Droid, and/or others. The course provides hands-on activities using an SDK (software development kit), along with instructions and guidelines for application deployment.

Prerequisite(s): 152-101 Programming Fund - JavaScript.

152-152 .NET - C# 2 cr

A hybrid of C and C++, C# is a Microsoft programming language developed to compete with Sun's Java language. C# is an object-oriented programming language used with XML-based Web services on the .NET platform and designed for improving productivity in the development of Web applications.

Prerequisite(s): 152-101 Programming Fund - JavaScript. Restricted to students admitted to the following program(s): 10-152-1 IT-Programmer/Analyst.

152-159 Web Multimedia 3 cr

Create animation for the web using the latest Flash development environment. The Flash interface will be thoroughly explored as you create Flash animation in this project-based course. Learn to create Flash vector graphics, tween animations, preloaders, and other applications as well as an introduction to Action Script programming in Flash.

Prerequisite(s): 152-101 Programming Fund - JavaScript and 152-107 Web 1-HTML & CSS.

152-160 C++ Programming 3 cr

Provides an introduction to computer programming logic using the C++ programming language. This course will give the student a basic understanding of problem-solving skills using a computer programming language. Practical experience with programming concepts will be gained through demonstration and hands-on lab exercises with input/output, data types, arrays, and various control structures.

Prerequisite(s): 152-101 Programming Fund - JavaScript.

152-161 3D Modeling 1 3 cr

Provides an introduction to 3D computer graphic creation using a sophisticated vendor graphic development package (3ds max). This course will give the student a basic understanding of the graphics package which includes modeling, texturing, lighting, and rendering 3D scenes.

152-162 3D Game/Simulation Programming 3 cr

3D Simulation Programming provides an introduction to simulation programming using an industry standard simulation engine and 3D graphic package. The student will learn how to incorporate 3D imagery into a simulation engine to build an interactive 3D simulation.

Prerequisite(s): 152-101 Programming Fund - JavaScript and 152-161 3D Modeling 1 (or taken concurrently).

152-164 Web 3 3 cr

Explore intermediate topics in server-side web development using PHP. The learner will get hands-on experience in the PHP environment with database applications using PHP and MySQL, sessions, cookies, string-handling, and other related topics.

Prerequisite(s): 152-108 Web 2-JavaScript & PHP and (152-132 Database 1 (or taken concurrently) or 107-132 Database Applic Development (or taken concurrently)).

152-165 3D Modeling 2 3 cr

This intermediate course provides a more in-depth, hands-on investigation of 3D modeling including an introduction to character modeling. The topics of lighting, camera views, and animation will be further explored. This course will also introduce particle systems to simulate real world physical events such as water effects and weather.

Prerequisite(s): 152-161 3D Modeling 1.

152-166 IT-P/A Capstone 3 cr

This advanced course provides further hands-on experience in 3D modeling techniques including character modeling and animation. The course continues to investigate dynamic effects using particles and special effects built into the modeling software. Modeling and rendering of larger, more detailed virtual world scenes will also be explored.

Prerequisite(s): 152-161 3D Modeling 1 and 152-165 3D Modeling 2 (or

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taken concurrently) and 152-162 3D Game/Simulation Programming (or taken concurrently).

152-168 Multimedia Program & Design 3 cr

Continue to build on the foundation with Flash applications learned in Web Development Tools by learning to harness the power of ActionScript - Flash's programming environment. Create powerful and entertaining web applications utilizing the 2D and 3D animation capabilities of Flash in this project-based course.

Prerequisite(s): 152-167 Flash Development I.

152-182 Programmer/Analyst Internship 3 cr

Students are encouraged to find an internship while enrolled in the Information Technology - Programmer Analyst program. Student interns may perform duties such as the following: programming business applications, web page design and development, database applications, systems analysis, and report writing. This internship may start any time of the year. Students are responsible for finding an internship prior to enrolling in this course. Students are required to keep the instructor apprised of work activities via email, face-to-face visits, and Blackboard discussions. The internship is available as 1, 2, or 3 credit offerings depending on the students needs and work hour availability.

Prerequisite(s): 152-107 Web I-HTML & CSS.

152-199 Programmer/Analyst Ind. Study 2 cr

176-Records & Information Mgmt

176-105 Foundations of RIM 3 cr

Course helps students understand the role of the records manager and the relationships between records management and related fields. Students will explore ways to garner management support for records management in their business environment. They will begin the initial processes and activities involved in conducting a records inventory and preparing retention schedules for both paper and electronic records. Current legislation as it affects records in business practice will be considered.

176-108 RIM Fundamentals 3 cr

Elaborates on the practices and techniques used in records management by completing further activities involving retention schedules, vital records protection, and disaster recovery programs for both paper and electronic records. Current litigation support issues as they affect records in business practice will continue to be considered.

Prerequisite(s): 176-105 Foundations of RIM.

176-111 Records Classification Systems 3 cr

The course covers hands-on applications for manual and electronic records classification systems including alphabetic, numeric, geographic, and subject systems. Students will also study facilities and equipment for storage, maintenance, and retrieval of manual and electronic records.

176-121 Records & Info Technology 3 cr

Students will explore information technology systems in the records management field, including various imaging technology such as microfilm, fiche, optical, and digital systems. Activities will consider how the technology affects the creation, retention, storage, and disposition of paper, electronic, and Web-based records.

Prerequisite(s): 176-108 RIM Fundamentals and 176-111 Records Classification Systems.

176-140 RIM Applications 3 cr

Students will apply knowledge gained in previous certificate courses to complete major projects and hands-on applications in areas relevant to their business situations. Student may choose from areas such as retention scheduling, vital records protection and disaster recovery, imaging, and electronic records management, including email and Web-content management. Trends and emerging issues will also be explored.

Prerequisite(s): 176-121 Records & Info Technology.

182-Logistics & Materials Mgmt

182-115 Inventory Control 3 cr

A detailed look at inventory that starts with the fundamentals of inventory management (what is it, why do we have it, why do we want it). The course then looks at techniques for economically planning and controlling our inventory. Topics include bills of materials, economic lot sizing, cycle counting, and stockroom control. Inventory Control is studied using both manual and computerized methods.

196-Supervision & Leadership Dev

196-110 Employee Benefits 3 cr

In this course we will examine the wide range of employee benefit programs available today. We will study the types of benefits required by law, the discretionary benefits that employers may offer, the employee services available, and the every dynamic retirement programs used today. An emphasis will be on health insurance, cafeteria plans, and a functional approach to employee benefit planning. A course outcome will be planning and preparing a company sponsored benefit plan.

196-111 Perform Mgmt & Empl Reward Sys 3 cr

In this course we will learn the skills set for managing employee performance including coaching, disciplining, and evaluating employees. In addition, the course will review employee rewards and compensation related to the determination of employee wages, incentives, and benefits. Specific topics covered include job evaluation systems, strategic compensation plans, payroll and individual and group incentive plans.

196-112 Training Systems 3 cr

This course provides an in-depth look at the process of employee training and development. Coverage includes how training relates to organizational goals, needs assessment, adult learning, training evaluation, employee orientation, selecting trainers, and much more.

196-113 Human Resource Law 3 cr

This course is designed to help the participant understand the law as it applies to the management of human resources. It addresses such topics as ADA compliance, hiring practices, discrimination issues, sexual harassment, and other human resource issues. Its coverage is aimed at helping HR employees recognize legal problems, to know the legal impact of decisions on personnel matters and to be knowledgeable in general of the law as it might impact individuals in organizations.

196-114 Recruitment & Selection 3 cr

In this course we will learn the importance of human capital and its impact on organizational success. Topic areas covered include recruitment, selection, career development, legal issues associated with selecting employees, and roles in the selection process. An emphasis will be on strategies associated with selecting and developing of employees for organizational success.

196-127 Employee Relations 3 cr

Today's workforce places high expectations on their respective Human Resource department from communication and advice on confidential matters to specific benefit options. In addition, employers expect the Human Resource department to be highly professional and competent in good employee relations. As a result, this course covers the following topic areas; customer service techniques, professional etiquette, confidentiality requirements, different work cultures and generational attitudes, and career paths in the Human Resource field. This course is intended to serve as the first program course for the Human Resource degree. Prerequisite(s): 102-111 Human Resources, Intro to.

196-128 Human Resources Internship 1 cr

Provides the student with 80 hours of on-site experience completing human resource-type tasks in a professional setting. Students may analyze data, prepare recommendations, and draft reports, serving in a human

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resources capacity. The following HR functions are examples where the student will be placed: staffing, payroll, safety, recruiting, benefit administration, training, and other support functions. Students are expected to coordinate with the instructor to locate an appropriate internship site.

The internship may be paid or unpaid. Students are supervised and evaluated by both the site work supervisor and the instructor. Take during final semester.

Prerequisite(s): 196-127 Employee Relations and 196-110 Employee Benefits and 196-113 Human Resource Law and 196-114 Recruitment & Selection and 196-136 Safety in the Workplace and 196-111 Perform Mgmt & Empl Reward Sys and 101-121 Payroll Accounting (or taken concurrently).

196-134 Legal Issues for Supervisors 3 cr

The learner applies the skills and tools necessary for a supervisor to effectively function in today's legal work environment. Each learner will demonstrate the application of legal practices in both union and nonunion environments, analysis of the impact of US employment laws, the impact of the global economy, the appeal process, reacting to legal charges, documenting the hiring and firing process, dealing with harassment issues, privacy issues, and summarizing legal issues facing contemporary supervisors. Prerequisite is not required when course is delivered via the Internet.

196-136 Safety in the Workplace 3 cr

The learner applies the skills and tools necessary to provide a safe and secure work environment. Each learner will demonstrate the application of safety awareness, federal/state/local compliance, incident investigation and documentation, human relations techniques, safety orientation, inspections, risk analysis, issues of workplace violence, substance abuse, and health hazards, first aid and CPR, fire and electrical safety, emergency preparedness, and liaison with external agencies.

196-163 Personal Skills for Supervisor 3 cr

The learner applies the skills and tools necessary to deal with the time management, stress, and related challenges to a supervisor. Each learner will demonstrate the application of time management techniques, personal planning, continuous learning, valuing rights and responsibilities of others, effective communication, assertiveness, and dealing effectively with stress.

196-164 Supervision of Personnel 3 cr

Examines in detail the major functions of supervision: planning, organizing, staffing, directing, and controlling. Special attention is given to motivating workers, delegating effectively, and communicating with subordinates. The emphasis is directed to the first level of supervision to prepare the student for his/her first supervisory role.

196-168 Organizational Development 3 cr

The learner applies the skills and tools necessary to effectively deal with organization behavior and change. Each learner will demonstrate the application of the impacts of globalization on an organization, dealing with organization culture, dealing with change and future challenges affecting the total organization, organization decision making, vision, goals, performance management and planning, and the role of organization structure. Only the 196-191 Supervision prerequisite is required when course is delivered via the Internet.

Prerequisite(s): 196-190 Leadership Development and 196-191 Supervision.

196-169 Diversity & Change Management 3 cr

The learner applies the skills and tools necessary to implement and maintain a diverse work environment which values change. Each learner will demonstrate the application of assessing the current extent of diversity in the workplace, analyze the effect of perceptions, attitudes, biases, and organization culture on diversity, dealing with barriers, change manage

The learner applies the skills and tools necessary to provide a safe and secure work environment. Each learner will demonstrate the application

196-188 Project Management 3 cr

The learner applies the skills and tools necessary to design, implement, and evaluate formal projects. Each learner will demonstrate the application of the role of project management, developing a project proposal, use of relevant software, working with project teams, sequencing tasks, charting progress, dealing with variations, budgets and resources, implementation, and assessment. Prerequisite is not required when course is delivered via the Internet.

196-189 Team Bldg & Problem Solving 3 cr

The learner applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will demonstrate the application of the benefits and challenges of group work, necessary roles in a team, stages of team development, different approaches to problem solving, consensus, a systematic process of problem definition, data acquisition, analysis, developing alternative solutions, solution implementation, and evaluation. Prerequisite is not required when course is delivered via the Internet.

196-190 Leadership Development 3 cr

Learner applies the skills and tools necessary to fulfill his/her role as a modern leader. Each learner will demonstrate the application of evaluating leadership effectiveness and organization requirements, individual and group motivation strategies, implementing mission and goals, ethical behavior, personal leadership style and adaptation, impacts of power, facilitating employee development, coaching, managing change, and effective conflict resolution. Prerequisite(s): 196-191 Supervision.

196-191 Supervision 3 cr

The learner applies the skills and tools necessary to perform the functions of a frontline leader. Each learner will demonstrate the application of strategies and transition to a contemporary supervisory role including day-to-day operations, analysis, delegation, controlling, staffing, leadership, problem-solving, team skills, motivation, and training. Prerequisite is not required when course is delivered via the Internet.

196-192 Managing for Quality 3 cr

The learner applies the skills and tools necessary to implement and maintain a continuous improvement environment. Each learner will demonstrate the application of a personal philosophy of quality, identifying all stakeholder relationships, meeting/exceeding customer expectations, a systems-focused approach, using appropriate models and tools, managing a quality improvement project, and measuring effectiveness of continuous improvement activities. Prerequisite is not required when course is delivered via the Internet.

196-193 Human Resource Management 3 cr

The learner applies the skills and tools necessary to effectively value and apply employees' abilities and needs to organization goals. Each learner will demonstrate the application of the supervisor's role in contemporary human resources management, impacts of EEOC, writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies and procedures, training, performance management, employee counseling and development, and effective use of compensation and benefit strategies. Prerequisite is not required when course is delivered via the Internet.

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Early Childhood Education

307-101 Infants Toddlers & Caregivers 3 cr

This course is designed to prepare individuals to provide quality to very young children. The course will be divided into three basic components, which include infant and toddler development, in addition to ages and stages, brain development, guidance techniques and attachment. The second component will encompass issues involving the caregiver, such as principles of caregiving, the curriculum, play, and diversity. The final module includes observation, assessment, and finally reflection. The overall objective of this course is to help caregivers gain knowledge and be able to apply that knowledge as they provide creative and quality care to very young children in whole and healthy ways.

307-102 Dev Learning Activities 3 cr

The value of creative and structured art and language activities is studied along with the utilization of materials and activities which are useful in the development of the program curriculum. Through creative planning and problem-solving techniques, the student will develop activity plans, implement these plans, and evaluate their effectiveness. The development and benefit of play activities for young children are introduced.

307-103 Child Guidance 3 cr

This course examines the ways in which children are socialized in our society. The development of children is studied in relationship to the influences of families and communities. Positive guidance techniques are developed to support children's social and emotional development. Stresses affecting children are identified and reasoning methods to enable children/families to adapt optimally to change are developed. Child abuse and neglect are examined with an emphasis on identification, reporting, and prevention. Brain development as well as environmental influences upon behavior will be discussed.

307-105 Curriculum Design 3 cr

Insight into the social world of young children will be gained as students design environments, activities, and routines to promote children's pro-social behavior. Students will be exposed to a variety of developmentally appropriate math, science, and social studies related activities for young children and gain experience in choosing, planning, and implementing these activities. Competency will be developed in creating bulletin boards, overhead enlargements, and anti-bias curriculum projects. Techniques for involving children in music and movement activities will be demonstrated and developed.

307-107 Exceptional Child 3 cr

Working with exceptional needs children; overview of special education process; understanding exceptionalities; methods and skills required to integrate special needs children into regular programs.

307-108 Child Growth & Dev, Intro to 3 cr

Introduces learners to child growth and development theories. Learners analyze growth and development of children from birth to age eight. All domains of development are explored: physical, social, emotional, cognitive, and language. Learners also examine social, cultural, and economic influences on child development as well as methods for observing and analyzing growth and development.

307-110 Early Childhood Educ, Intro to 3 cr

Introduces learners to the early childhood education profession. Learners examine types of early childhood education settings, the history of early childhood education, legal and ethical responsibilities of early childhood education professionals, and early childhood education professional organizations. Learners also assess their ability to work in this profession and initiate development of a professional plan.

307-122 Prgms, Families, & Society 3 cr

This course will focus on partnerships with parents and collaboration with the community. Covers parent education, involvement, and

inclusion as well as such issues as public policy, advocacy, community resources, and professionalism.

307-138 Early Childhood Practicum I 2 cr

Provides opportunity to practice interaction with young children in the child care center under supervision. This practicum allows learners to apply a combination of knowledge, skills, and experiences acquired in related child care courses to that of the practicum site.

Prerequisite(s): 307-110 Early Childhood Educ, Intro to (or taken concurrently).

307-139 Early Childhood Practicum 2 3 cr

Provides experience using developmentally appropriate child care techniques in a supervised setting. Learners practice and refine skills appropriate to the care of young children and to the provisions of a safe and healthy learning environment.

Prerequisite(s): 307-138 Early Childhood Practicum I or 307-174 ECE: Practicum 1.

307-148 ECE: Foundations of ECE 3 cr

This course introduces you to the early childhood profession. Course competencies include: integration of strategies that support diversity and anti-bias perspectives; investigate the history of early childhood education; summarize types of early childhood education settings; identify the components of a quality early childhood education program; summarize responsibilities of early childhood education professionals; explore early childhood curriculum models.

Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

307-151 ECE: Infant & Toddler Dev 3 cr

In this course you will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; analyze development of infants and toddlers (conception to three years); correlate prenatal conditions with development; summarize child development theories; analyze the role of heredity and the environment; examine research-based models; examine culturally and developmentally appropriate environments for infants and toddlers.

Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

307-153 Operations Management ECE 3 cr

Discussion and practical applications related to scheduling, facility management, staffing, equipment acquisition and maintenance, service delivery, recordkeeping, and communication. This course is one of six courses required for the Child Care Administrator Credential Certificate.

307-165 Hlth, Safety, Nutr for Yng Chd 3 cr

Focuses on the legal and ethical responsibilities of early childhood education professionals in providing for the health, safety, and nutrition of young children. Learners examine governmental practice skills to assess indoor and outdoor environments for safety, employ universal precautions for routine care of children, respond to emergency situations, conduct health assessments, and guide children in developing healthy food habits.

307-166 ECE: Curriculum Planning 3 cr

This course examines the components of curriculum planning in early childhood education. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play; establish a developmentally appropriate environment; examine caregiving routines as curriculum; develop activity plans that promote child development and learning; develop unit plans that promote child development and learning; analyze early childhood curriculum models.

Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

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307-167 ECE: Hlth Safety & Nutrition **3 cr**
This course examines the topics of health, safety, and nutrition within the context of the early childhood educational setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; follow governmental regulations and professional standards as they apply to health, safety, and nutrition; provide a safe early childhood program; provide a healthy early childhood program; provide a nutritionally sound early childhood program; adhere to child abuse and neglect mandates; apply Sudden Infant Death Syndrome (SIDS) risk reduction strategies; incorporate health, safety, and nutrition concepts into the children's curriculum.

Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

307-171 WI Early Learning Standards **1 cr**
The Wisconsin Model Early Learning Standards specify developmental expectations for children upon kindergarten completion. This course introduces the standards and uses the teaching cycle of assessment, planning, and implementation to support early care and education teachers in a variety of settings in implementing developmentally appropriate practices. The course provides an overview of the developmental domains through case study, video-based observation, and reflection. Participants increase their awareness of the state and national content of early learning standards and their application and relationship to community school, child care, and Head Start programs.

307-174 ECE: Practicum 1 **3 cr**
In this practicum course you will learn about and apply the course competencies in an actual child care setting. The course competencies include: document children's behavior; explore the standards for quality early childhood education; explore strategies that support diversity and anti-bias perspectives; implement activities developed by the co-op teacher/instructor; demonstrate professional behaviors; practice caregiving routines as curriculum; practice positive interpersonal skills with children; practice positive interpersonal skills with adults.

Prerequisite(s): 307-148 ECE: Foundations of ECE (or taken concurrently) or 307-110 Early Childhood Educ, Intro to (or taken concurrently). Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

307-178 ECE: Art Music & Lang Arts **3 cr**
This course will focus on beginning level curriculum development in the specific content areas of art, music, and language arts. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play; establish a developmentally appropriate environment; develop activity plans that promote child development and learning; analyze caregiving routines as curriculum; create developmentally appropriate language, literature, and literacy activities; create developmentally appropriate art activities; create developmentally appropriate music and movement activities.

Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

307-179 ECE: Child Development **3 cr**
The course examines child development within the context of the early childhood education setting. Course competencies include: analyze social, cultural, and economic influences on child development; summarize child development theories; analyze development of children age three through age eight; summarize the methods and designs of child development research; analyze the role of heredity and the environment.

Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

307-183 Group Care-Infants & Toddlers **3 cr**
Examines the principles of developmentally appropriate infant/toddler

care in center-based and family child care settings. Program environment, structure and philosophy are explored as are diversity and inclusion and relevant health and safety issues.

307-187 ECE: Children w Diff Abilities **3 cr**
The course focuses on the child with differing abilities in an early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; provide inclusive programs for young children; apply legal and ethical requirements including, but not limited to, ADA and IDEA; differentiate between typical and exceptional development; analyze the differing abilities of children with physical, cognitive, health/medical, communication, and/or behavioral/emotional disorders; work collaboratively with community and professional resources; utilize an individual educational plan (IEP/IFSP) for children with developmental differences; adapt curriculum to meet the needs of children with developmental differences; cultivate partnerships with families who have children with developmental differences.

Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

307-188 ECE: Guiding Child Behavior **3 cr**
This course examines positive strategies to guide children's behavior in the early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; summarize early childhood guidance principles; analyze factors that affect the behavior of children; practice positive guidance strategies; develop guidance strategies to meet individual needs; create a guidance philosophy.

Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

307-192 ECE: Practicum 2 **3 cr**
In this practicum course you will learn about and apply the course competencies in an actual child care setting. The course competencies include: identify children's growth and development; maintain the standards for quality early childhood education; practice strategies that support diversity and anti-bias perspectives; implement student teacher-developed activity plans; identify the elements of a developmentally appropriate environment; implement positive guidance strategies; demonstrate professional behaviors; utilize caregiving routines as curriculum; utilize positive interpersonal skills with children; utilize positive interpersonal skills with adults.

Prerequisite(s): 307-174 ECE: Practicum 1 or 307-138 Early Childhood Practicum I. Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

307-194 ECE: Math Science & Soc St **3 cr**
This course will focus on beginning level curriculum development in the specific content areas of math, science, and social studies. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play; establish a developmentally appropriate environment; develop activity plans that promote child development and learning; create developmentally appropriate science activities; create developmentally appropriate math activities; create developmentally appropriate social studies activities.

Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

307-195 ECE: Family & Community Rel **3 cr**
In this course you will examine the role of relationships with family and community in early childhood education. Course competencies include: implement strategies that support diversity and anti-bias perspectives when working with families and community; analyze contemporary family patterns, trends, and relationships; utilize effective communication strategies; establish ongoing relationships with families; advocate

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This course focuses on the administration of an early childhood education program. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; analyze

307-197 ECE: Practicum 3 **3 cr**

In this practicum course you will learn about and apply the course competencies in an actual child care setting. The course competencies include: assess children's growth and development; implement the standards for quality early childhood education; integrate strategies that support diversity and anti-bias perspectives; build meaningful curriculum; provide a developmentally appropriate environment; facilitate positive guidance strategies; evaluate one's own professional behaviors and practices; lead caregiving routines as curriculum; utilize positive interpersonal skills with children; utilize positive interpersonal skills with adults.

Prerequisite(s): 307-192 ECE: Practicum 2 or 307-139 Early Childhood Practicum 2. Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

307-198 ECE: Admin an ECE Program **3 cr**

This course focuses on the administration of an early childhood education program. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; analyze the components of an ECE facility; design an ECE program; analyze the aspects of personnel supervision; outline financial components of an ECE program; apply laws and regulations related to an ECE facility; advocate for the early childhood profession.

Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

307-199 ECE: Practicum 4 **3 cr**

In this practicum course you will learn about and apply the course competencies in an actual child care setting. Course competencies include: analyze children's growth and development based on assessment; integrate strategies that support diversity and anti-bias perspectives; promote professional behaviors and practices; implement meaningful curriculum; create respectful, reciprocal relationships; evaluate early childhood education programs for quality; explore professional options in early childhood education.

Prerequisite(s): 307-197 ECE: Practicum 3 or 307-145 Early Childhood Practicum 3. Restricted to students admitted to the following program(s): 10-307-1 Early Childhood Education, 31-307-1 Child Care Services.

307-342 Supervised Participation **4 cr**

Students are given the opportunity to assist in child care programs under the direction of a qualified supervisor. Under the guidance of the supervisor and cooperating teacher, the student will cooperatively develop, plan, and implement activities for children. Aspects of quality programming and successful job placement are integrated into the course.

Prerequisite(s): 307-102 Dev Learning Activities and 307-104 Child Development-Preschool + (or taken concurrently) and 307-105 Curriculum Design (or taken concurrently) and 307-332 Health and Safety and 307-341 Observation & Recording.

307-342A Infant/Toddler Cert Practicum **3 cr**

Review, practice, and demonstration of child care skills related to an identified age group or type of child care setting. This course is not eligible for financial aid.

Prerequisite(s): (307-101 Infants Toddlers & Caregivers (or taken concurrently) or 307-151 ECE: Infant & Toddler Dev (or taken concurrently) and (307-103 Child Guidance (or taken concurrently) or 307-188 ECE: Guiding Child Behavior (or taken concurrently) and (307-110 Early Childhood Educ, Intro to (or taken concurrently) or 307-148 ECE: Foundations of ECE (or taken concurrently) and (307-165 Hlth, Safety,

Nutr for Yng Chd (or taken concurrently) or 307-167 ECE: Hlth Safety & Nutrition (or taken concurrently) and 531-350 First Aid CPR (or taken concurrently).

401-Air Conditioning, Refrigeration & Heating

401-302 Basic Refrig & Air Cond **4 cr**

Students learn the fundamental principles of the refrigeration circuit. A special effort is made to correlate the fundamental theories and principles to the actual practices that are used in the refrigeration and air conditioning industry.

Prerequisite(s): 401-351 Basic Electricity HVACR (or taken concurrently). Co-requisite(s): 401-303 Applic of Refrig & Air Co.

401-303 Applic of Refrig & Air Cond **4 cr**

The operation and maintenance of domestic and commercial refrigeration and air conditioning systems is the main emphasis of this course. Students learn to work with all the tools and equipment needed to operate a refrigeration and air conditioning system.

Co-requisite(s): 401-302 Basic Refrig & Air Co.

401-304 Refrig Sys Install & Service **4 cr**

Students learn the techniques to install, test, maintain, and troubleshoot residential and commercial refrigeration systems. Students will have the benefit of learning in a well-equipped lab that provides experience on both residential and commercial refrigeration systems.

Prerequisite(s): 401-303 Applic of Refrig & Air Cond. Co-requisite(s):

401-305 Air Cond Sys Install & Service **4 cr**

Students learn the techniques to install, test, maintain, and troubleshoot residential and commercial air conditioning systems. Students will have the benefit of learning in a well-equipped lab that provides experience on both residential and commercial air conditioning systems.

Co-requisite(s): 401-304 Refrig Sys Install & Service.

401-310 Schematic Wiring **2 cr**

Reading and interpreting electrical schematics found on a variety of refrigeration, air conditioning and heating equipment.

Prerequisite(s): 414-341 Related Electricity Electronic or 401-351 Basic Electricity HVACR.

401-322 Heating Concepts **3 cr**

Heating systems and equipment used in residential and commercial buildings.

Prerequisite(s): 414-341 Related Electricity Electronic (or taken concurrently) or 401-351 Basic Electricity HVACR (or taken concurrently).

401-340 Basic HVAC Concepts **2 cr**

This course deals with how air is treated by HVAC (Heating, Ventilating, and Air Conditioning) equipment to maintain health and comfort. It will assist the beginning or less experienced comfort specialist in understanding the principles that underlie present day heating, ventilation, and air conditioning equipment, both residential and commercial.

401-350 Refrigeration Systems **2 cr**

Fundamental principles of refrigeration and air conditioning systems. Refrigerant reclamation, soldering, and brazing, piping, and installation of systems.

401-351 Basic Electricity HVACR **2 cr**

Electric principles, controls, motors, schematics, and systems are applied as they relate to refrigeration, air conditioning, and heating systems.

Note: This course requires the purchase of a tool kit for approximately \$500.

404-Automobile - Mechanical

404-303 Elec Cir Trblsh & Adv Body Sys **2 cr**

Students will develop the skills needed to read and apply technical information, specifications, and strategy based diagnostic procedures

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for use in electrical circuit/systems troubleshooting. Classroom instruction and hands-on training are provided on how to use electrical wiring diagrams, component locators, and basic testing tools (such as jumpers, test lights, and DVOMs) to identify and isolate 'open,' 'short' and 'high resistance' faults in automotive lighting and accessory system circuits. Specific advanced body electrical systems diagnosis and service includes passive restraint and air bag systems, conventional and electronic instrumentation, and cruise control systems. 'Scan' tool diagnostics on newer vehicles are covered as they relate to these systems.

Co-requisite(s): 404-333 Auto Elec, Eng & Body Elec Sys. Restricted to students admitted to the following program(s): 31-404-3 Automotive Maintenance Tech.

404-306 Brake Sys & Engine Repair **5 cr**

This course is based on ASE/NATEF competencies for brake system (80 hours) and engine mechanical repair (80 hours). Students can develop the knowledge needed to apply the technical information, specifications, and repair procedures used in brake, engine mechanical, and cooling system service. Competencies include the skills needed to safely and correctly use tools and equipment to service disc brakes, drum brakes, drum and motor machining, power brakes, rear-wheel disc brakes and cooling systems (flushing, cylinder head/valve train systems, including timing belts and chains, short-block assemblies and lubrication systems). Video-tapes are used to individualize the instruction of equipment operation. Prerequisite(s): 404-303 Elec Cir Trblsh & Adv Body Sys and 404-333 Auto Elec, Eng & Body Elec Sys. Co-requisite(s): 404-307 Antilock Brk & Eng Mech Diag.

404-307 Antilock Brk & Eng Mech Diag **2 cr**

This course is based on ASE/NATEF competencies for ABS (40 hours) and engine mechanical diagnosis (40 hours). Students can develop the knowledge needed to apply the technical information, specifications, and repair procedures used in ABS and diagnosing engine mechanical problems.

Prerequisite(s): 404-303 Elec Cir Trblsh & Adv Body Sys and 404-333 Auto Elec, Eng & Body Elec Sys. Co-requisite(s): 404-306 Brake Sys & Engine Repair.

404-308 Automotive Air Conditioning **3 cr**

This course is based on ASE competencies for Heating and Air Conditioning. Students will have the opportunity to develop the knowledge and skills needed to diagnose and service heating and air conditioning systems. This will include disassemble, inspect, repair, assemble, and service heating and air conditioning systems using manufacturers directions, procedures, and specifications and do this with a high degree of self-confidence. The state of Wisconsin Mobil Air Conditioning Recovery, Recycling Certification is administered during this course.

Prerequisite(s): 404-303 Elec Cir Trblsh & Adv Body Sys and 404-333 Auto Elec, Eng & Body Elec Sys.

404-314 Automatic Transmission Repair **3 cr**

This course is designed to give the student entry-level knowledge in automotive automatic transmissions and transaxles. After satisfactory completion of this course, the student will be able to diagnose and test automatic transmissions and transaxles in automobiles and light trucks. Prerequisite(s): 404-334 Auto Elec & Computer Systems and 404-340 Engine Performance.

404-321 Steering Susp & Manual Drv Trn **5 cr**

This course is based on ASE/NATEF competencies and includes 100 hours of suspension, steering, and wheel alignment, along with 60 hours of drivetrains. Students can develop the knowledge needed to read and apply technical information, specifications, and repair procedures used in chassis and drivetrain servicing. Competencies include the skills needed to safely use tools and equipment to diagnose and repair MacPherson

strut, short and long arm, and sport utility/light truck suspension systems; power and manual steering systems, including rack and pinion; tires and wheels; wheel bearings; 4X4 hubs and axles; four-wheel alignment with up-to-date computerized equipment; clutches; manual transmissions; differentials; constant velocity and cardan universal joints; and related drivetrain components.

Co-requisite(s): 404-353 Info Sys & Rel Drive Trai. Restricted to students admitted to the following program(s): 31-404-3 Automotive Maintenance Tech.

404-333 Auto Elec, Eng & Body Elec Sys **5 cr**

A course of study designed to provide the student with an understanding of electrical fundamentals, including electrical/electronic terminology, electrical components, circuits, measurements, and Ohm's Law relationships. Lab work involves basic, series, and parallel circuit analysis using digital volt-ohmmeters. Automotive body electrical systems (lighting, safety, and powered accessory) circuits are studied with related lab work involving locating/replacing circuit components, lamp replacement, headlight aiming, and circuit repair. Engine electrical systems (battery, starting, charging, and cooling fan circuit) coverage includes testing with specialized VAT and AVR equipment. Practice in applying wiring diagram interpretation and circuit troubleshooting skills will continue with customer supplied vehicles.

Co-requisite(s): 404-303 Elec Cir Trblsh & Adv Body Sys. Restricted to students admitted to the following program(s): 31-404-3 Automotive Maintenance Tech.

404-334 Auto Elec & Computer Systems **2 cr**

This course covers basic electronic components and circuits leading to an understanding of automotive computer system operation. Fundamentals of electronics, semiconductor materials, diodes, zener diodes, transistors, analog and digital signals, computer memory, and processor inputs and outputs will be related to basic computer operation. Specific instructions for locating diagnostic resources, vehicle data access, fault code interpretation, and diagnostic strategy will be related to General Motors, Chrysler, and Ford OBD I (On Board Diagnostics-first generation) engine control systems. Second generation On Board Diagnostics (OBD II) system function and testing will include generic as well as manufacturer specific scan tool use and testing procedures.

Prerequisite(s): 404-303 Elec Cir Trblsh & Adv Body Sys and 404-333 Auto Elec, Eng & Body Elec Sys. Co-requisite(s): 404-340 Engine Performance.

404-335 Automotive Fundamentals **1 cr**

A course of study designed to provide the student with an overview of the automotive program along with shop equipment and safety. Computer-based SP2 online safety training will be utilized. Also included is instruction on hand & power tool operation, fastener identification, vehicle lifting procedures, ASE certification criteria, career exploration, and history of the automobile industry.

Restricted to students admitted to the following program(s): 31-404-3 Automotive Maintenance Tech.

404-336 Basic Vehicle Maintenance **4 cr**

A course of study designed to provide the student with the skills necessary to perform vehicle maintenance operations such as oil changes, chassis lubrication, tire rotations and inspections. Students will inspect chassis and brake systems, perform safety inspections, maintenance light reset procedures, and retrieve OBD II DTCs.

Prerequisite(s): 404-335 Automotive Fundamentals (or taken concurrently). Co-requisite(s): 404-337 Automotive Electricity 1 and 404-338 Automotive Electricity 2 and 404-339 Automotive Brake Systems.

404-337 Automotive Electricity 1 **2 cr**

A course of study designed to provide the student with the skills needed

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to understand electrical fundamentals, including electrical/electronic terminology, electrical components, circuits, measurements, and Ohm's Law relationships. Classroom instruction and hands-on training are provided on how to use electrical wiring diagrams, component locators, and basic testing using industry standard tools to identify and isolate 'open', 'short' and 'high resistance' faults in automotive electrical system circuits. Automotive electrical circuits are studied with related lab work involving locating/replacing circuit components, wire & terminal repair using industry-approved techniques; battery diagnosis, testing & replacement; and electrical cooling fan diagnosis.

Prerequisite(s): 404-335 Automotive Fundamentals (or taken concurrently). Co-requisite(s): 404-336 Basic Vehicle Maintenance and 404-338 Automotive Electricity 2 and 404-339 Automotive Brake Systems.

404-338 Automotive Electricity 2 **3 cr**

A course of study designed to provide the student with the skills needed to read and apply technical information, specifications, and strategy based diagnostic procedures for use in troubleshooting chassis electrical systems: starting, charging, instrument panel, lighting, powered accessories, and relay controlled circuits. Chassis electrical systems coverage includes testing with industry standard testing equipment.

Prerequisite(s): 404-335 Automotive Fundamentals (or taken concurrently). Co-requisite(s): 404-336 Basic Vehicle Maintenance and 404-337 Automotive Electricity 1 and 404-339 Automotive Brake Systems.

404-339 Automotive Brake Systems **3 cr**

A course of study designed to provide the student with the skills needed to diagnose, service and repair foundation brake systems found on cars and light-duty trucks using industry standard equipment.

Prerequisite(s): 404-335 Automotive Fundamentals (or taken concurrently). Co-requisite(s): 404-336 Basic Vehicle Maintenance and 404-337 Automotive Electricity 1 and 404-338 Automotive Electricity 2.

404-340 Engine Performance **5 cr**

Engine performance competencies are covered for diagnosis and repair of distributor (DI) and distributorless (EI) ignition systems. Ignition system primary circuit testing will be related to no start/hard start-fault diagnosis. Ignition system secondary testing will utilize engine analyzer oscilloscope patterns to verify system performance. Basic air/fuel delivery system testing will also be related to no start/hard start-fault diagnosis. Pressure and volume tests will be used to verify fuel pump operation. Students will be able to safely remove and replace in-tank fuel pumps. Both throttle body and port fuel injection system testing will include computer system On-Board Diagnostics accessed with a 'scan' tool as well as specialized equipment for testing and analyzing fuel injectors. Fuel system service will include filter replacement, as well as throttle valve, intake manifold, and injector cleaning. Practice in applying servicing, diagnostic, and repair skills will continue with customer supplied vehicles.

Prerequisite(s): 404-303 Elec Cir Trblsh & Adv Body Sys and 404-333 Auto Elec, Eng & Body Elec Sys. Co-requisite(s): 404-334 Auto Elec & Computer Systems.

404-350 Auto Steering & Suspension Sys **4 cr**

A course of study designed to provide the student with the skills needed to diagnose, service and repair suspension systems found on cars and light-duty trucks using industry standard equipment, with an emphasis on component identification, inspection, diagnosis & replacement.

Prerequisite(s): 404-336 Basic Vehicle Maintenance and 404-337 Automotive Electricity 1 and 404-338 Automotive Electricity 2 and 404-339 Automotive Brake Systems. Co-requisite(s): 404-351 Auto Engine Performance 1 and 404-352 Auto Engine Performance 2 and 404-355 Auto Engine Performance 3.

404-351 Auto Engine Performance 1 **2 cr**

A course of study designed to provide the student with the skills needed to explain how an internal combustion engine operates and develops horsepower and torque. Students will disassemble an internal combustion engine, identify & measure components, reassemble engine using industry standard tools and procedures, and perform basic engine tests. Prerequisite(s): 404-336 Basic Vehicle Maintenance and 404-337 Automotive Electricity 1 and 404-338 Automotive Electricity 2 and 404-339 Automotive Brake Systems. Co-requisite(s): 404-350 Auto Steering & Suspension Sys and 404-352 Auto Engine Performance 2 and 404-355 Auto Engine Performance 3.

404-352 Auto Engine Performance 2 **3 cr**

A course of study designed to provide the student with the skills needed to diagnose, service & repair automotive ignition and fuel systems. The student will learn maintenance and troubleshooting and procedures for late-model vehicles using various types of engine, fuel pressure and exhaust diagnostic equipment.

Prerequisite(s): 404-336 Basic Vehicle Maintenance and 404-337 Automotive Electricity 1 and 404-338 Automotive Electricity 2 and 404-339 Automotive Brake Systems. Co-requisite(s): 404-350 Auto Steering & Suspension Sys and 404-351 Auto Engine Performance 1 and 404-355 Auto Engine Performance 3.

404-353 Info Sys & Rel Drive Train **2 cr**

The first 40 hours includes repair order completion, time/labor guides and estimating procedures, consumer protection/estimating laws, mechanic liens, and hazardous materials handling. The course also covers how to use service manuals of all types and DVD data system, plus how to study, take notes, and keep up-to-date on the job (bulletins, trade publications, service schools, and after-market training). The second 40 hours is based on ASE/NATEF competencies for automatic transmissions/transaxels. Students can develop the knowledge needed to apply technical information, specifications, and repair procedures used in automatic transmission/transaxle servicing.

Co-requisite(s): 404-321 Steering Susp & Manual Drv Tr. Restricted to students admitted to the following program(s): 31-404-3 Automotive Maintenance Tech.

404-355 Auto Engine Performance 3 **3 cr**

A course of study designed to provide the student with the skills needed to diagnose, service and repair automotive computer controls and emission control systems. Basic electronic components and circuits are reviewed, leading to an understanding of automotive computer systems operations. Fundamentals of electricity, electronics, semiconductor materials, diodes, transistors, analog & digital signals, computer memory, sensors, actuators, and processor inputs/outputs will be related to basic computer operation. Specific instructions for locating diagnostic resources, vehicle data access, fault code interpretation, and diagnostic strategy will be related to On-Board Diagnostics engine control systems. Testing will include industry standard generic as well as manufacturer specific scan tool use and testing procedures.

Prerequisite(s): 404-336 Basic Vehicle Maintenance and 404-337 Automotive Electricity 1 and 404-338 Automotive Electricity 2 and 404-339 Automotive Brake Systems. Co-requisite(s): 404-350 Auto Steering & Suspension Sys and 404-351 Auto Engine Performance 1 and 404-352 Auto Engine Performance 2.

404-356 Automotive HVAC Systems **4 cr**

A course of study designed to provide the student with the skills needed to diagnose, service and repair heating, ventilating, and air conditioning systems in automobiles. The student will be able to evacuate and recharge A/C systems, convert A/C systems from R-12 to R134 a refrigerant according to industry standards, and perform component replace-

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ment. Students will be able to diagnose and repair computerized climate control systems. Upon successful completion of the course, the student will be licensed to perform A/C repairs in the state of Wisconsin.

Prerequisite(s): 404-350 Auto Steering & Suspension Sys and 404-351 Auto Engine Performance 1 and 404-352 Auto Engine Performance 2 and 404-355 Auto Engine Performance 3. Co-requisite(s): 404-357 Auto Safety & Security Systems.

404-357 Auto Safety & Security Systems 2 cr

A course of study designed to provide the student with the skills needed to diagnose, service, and repair safety, security, and entertainment systems on late-model automobiles. Inflatable restraints, theft deterrent, navigation, and collision avoidance systems will be explored. Coursework will continue with radios, GPS, integrated DVD systems, and cellular and satellite based communication.

Prerequisite(s): 404-350 Auto Steering & Suspension Sys and 404-351 Auto Engine Performance 1 and 404-352 Auto Engine Performance 2 and 404-355 Auto Engine Performance 3. Co-requisite(s): 404-356 Automotive HVAC Systems.

404-360 Auto Axles & Drive Trains 2 cr

A course of study designed to provide the student with the skills needed to diagnose, service, and repair automotive axles and drive trains.

Coursework includes: wheel bearings, constant velocity joints, drive shafts & u-joints, and differential units.

Prerequisite(s): 404-356 Automotive HVAC Systems and 404-357 Auto Safety & Security Systems. Co-requisite(s): 404-361 Manual Transmission & Trnsaxles and 404-362 Auto Transmission & Trnsaxles and 404-363 Engine Repair.

404-361 Manual Transmission & Trnsaxles 3 cr

A course of study designed to provide the student with the skills needed to diagnose, service, and repair manual transmissions & transaxels on late-model vehicles. Coursework includes: hydraulic clutches, manual transmission theory & application, and the repair & overhaul of a manual transmission.

Prerequisite(s): 404-356 Automotive HVAC Systems and 404-357 Auto Safety & Security Systems. Co-requisite(s): 404-360 Auto Axles & Drive Trains and 404-362 Auto Transmission & Trnsaxles and 404-363 Engine Repair.

404-362 Auto Transmission & Trnsaxles 4 cr

A course of study designed to provide the student with the skills needed to diagnose, service, and repair automatic transmissions & transaxels on late-model vehicles. Students will explore the principles of hydraulic and electronic controls as it relates to the automatic transmission. This includes operation of solenoids, sensors, seals, hydraulic clutches, servos, planetary gear sets & drives, and performing a failure evaluation along with a major overhaul of a late-model automatic transmission.

Prerequisite(s): 404-356 Automotive HVAC Systems and 404-357 Auto Safety & Security Systems. Co-requisite(s): 404-360 Auto Axles & Drive Trains and 404-361 Manual Transmission & Trnsaxles and 404-363 Engine Repair.

404-363 Engine Repair 3 cr

A course of study designed to provide the student with the skills needed to diagnose, service, and repair internal combustion, engines found on late-model vehicles. Coursework includes: lubrication systems, valve timing, leak diagnosis and repair, engine noise & failure diagnosis, valve service, cylinder head replacement, and engine removal/replacement procedures.

Prerequisite(s): 404-356 Automotive HVAC Systems and 404-357 Auto Safety & Security Systems. Co-requisite(s): 404-360 Auto Axles & Drive Trains and 404-361 Manual Transmission & Trnsaxles and 404-362 Auto Transmission & Trnsaxles.

404-370 Adv Auto Chassis Systems 4 cr

A course of study designed to provide the student with the skills needed to diagnose, service, and repair advanced suspension components found on late-model vehicles. Coursework includes: wheel alignment, anti-lock brakes, tire pressure monitoring, electric steering, active suspension, and vehicle stability control, and traction control systems.

Prerequisite(s): 404-360 Auto Axles & Drive Trains and 404-361 Manual Transmission & Trnsaxles and 404-362 Auto Transmission & Trnsaxles and 404-363 Engine Repair. Co-requisite(s): 404-371 Adv Engine Perf & Alt Fuels and 404-372 Service Simulation and 404-373 High Performance Automotive and 404-374 ASE Test Preparation.

404-371 Adv Engine Perf & Alt Fuels 3 cr

A course of study designed to provide the student with the skills needed to operate a 4 or 5 gas analyzers and explain how they are used to analyze engine performance. Diesel engines will be explored. Compressed Natural Gas (CNG), ethanol, hybrid vehicles, fuel cells, and other alternative fuels will be discussed. Technician and Responder safety when working with these issues will also be included.

Prerequisite(s): 404-360 Auto Axles & Drive Trains and 404-361 Manual Transmission & Trnsaxles and 404-362 Auto Transmission & Trnsaxles and 404-363 Engine Repair. Co-requisite(s): 404-370 Adv Auto Chassis Systems and 404-372 Service Simulation and 404-373 High Performance Automotive and 404-374 ASE Test Preparation.

404-372 Service Simulation 3 cr

Students will be diagnosing and repairing vehicles in all areas of repair. Students will also assume the roles of service manager, service advisor, and shop foreman. Emphasis will be placed on the skills needed to own/manage an automobile service facility.

Prerequisite(s): 404-360 Auto Axles & Drive Trains and 404-361 Manual Transmission & Trnsaxles and 404-362 Auto Transmission & Trnsaxles and 404-363 Engine Repair. Co-requisite(s): 404-370 Adv Auto Chassis Systems and 404-371 Adv Engine Perf & Alt Fuels and 404-373 High Performance Automotive and 404-374 ASE Test Preparation.

404-373 High Performance Automotive 1 cr

A course of study designed to provide the student with the skills needed to perform basic improvements to drive train components to enhance vehicle performance. Performing legal modifications to existing vehicle components will be discussed, with emphasis on differentiating between legitimate and scam-type modifications.

Prerequisite(s): 404-360 Auto Axles & Drive Trains and 404-361 Manual Transmission & Trnsaxles and 404-362 Auto Transmission & Trnsaxles and 404-363 Engine Repair. Co-requisite(s): 404-370 Adv Auto Chassis Systems and 404-371 Adv Engine Perf & Alt Fuels and 404-372 Service Simulation and 404-374 ASE Test Preparation.

404-374 ASE Test Preparation 1 cr

This course will help prepare students to write the ASE certification tests in all eight areas. Practice ASE exams will be used to learn test taking strategies and retain automotive technical knowledge. The ASE End of Program Tests will also be taken during this course.

Prerequisite(s): 404-360 Auto Axles & Drive Trains and 404-361 Manual Transmission & Trnsaxles and 404-362 Auto Transmission & Trnsaxles and 404-363 Engine Repair. Co-requisite(s): 404-370 Adv Auto Chassis Systems and 404-371 Adv Engine Perf & Alt Fuels and 404-372 Service Simulation and 404-373 High Performance Automotive.

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405-Auto Body-Chassis & Finish

405-300 Explor Auto Body Repair & Refn **1 cr**
 Designed principally to orientate high school Juniors and Seniors to the auto collision trade in general. Designed to explore the curriculum of the full-time, ASE approved Auto Collision program as well as the nature and the job description of a full-time auto collision technician journeyworker. Will provide practical and realistic knowledge in basic tool usage, safety, paint preparation, straightening procedures, welding, dent repair on practice panels, and painting techniques.

405-301 Introduction to Auto Collision **1 cr**
 This course is designed to prepare students for entry into the Auto Collision Program. Emphasis will be placed on lab safety. Program orientation, and customer vehicle processes.

405-352 Advanced Collision Repair **5 cr**
 Students will learn the techniques associated with mechanical repair or replacement of mechanical components related to collision. Restoration/customizing are not available as a part of this course.
 Restricted to students admitted to the following program(s): 31-405-1 Auto Collision Rpr & Ref Tech.

405-355 Auto Body Basics **5 cr**
 This course will give students the opportunity to acquire skills in basic metal finishing techniques, body panel repair techniques, plastic filler application, and surface preparation.
 Prerequisite(s): 405-382 Paint Technology (or taken concurrently) and 442-315A Welding for Auto Collision (or taken concurrently). Restricted to students admitted to the following program(s): 31-405-1 Auto Collision Rpr & Ref Tech.

405-356 Nonstructural Repair **5 cr**
 Students will develop skills in repair of minor and major dent repair, nonstructural.
 Prerequisite(s): 405-355 Auto Body Basics (or taken concurrently). Restricted to students admitted to the following program(s): 31-405-1 Auto Collision Rpr & Ref Tech.

405-357 Refinishing **5 cr**
 Students will complete paint jobs, spot repair, color blending, sanding techniques and taping.
 Prerequisite(s): 405-356 Nonstructural Repair.

405-358 Structural Repair **5 cr**
 Students will determine types and levels of damage to Unibody and frame vehicles. Skill in measuring needed repairs will be developed.
 Prerequisite(s): 405-357 Refinishing (or taken concurrently).

405-375 Estimating & Structural Repair **2 cr**
 Terms, abbreviations, and vehicle identification necessary for estimating collision damage will be learned. Emphasis will be placed on following estimating procedures along with development of damage estimate writing skills. Students will acquire the knowledge necessary to conduct an inspection and perform damage analysis, both structural and non-structural.

Prerequisite(s): 405-356 Nonstructural Repair and 405-382 Paint Technology. Restricted to students admitted to the following program(s): 31-405-1 Auto Collision Rpr & Ref Tech.

405-381 Auto Collision Mechanical **1 cr**
 This is an eight-week theory and lab course offered only in the summer. Designed to promote skills in repairing mechanical damage caused by collision. Diagnosis and repair or replacement of steering and suspension parts, brakes, and drive axles. Practical hands-on work to learn removal and replacement of mechanical parts, cooling system, and air conditioning components. Basic wheel alignment, auto body air conditioning, and auto body electrical will be studied.
 Restricted to students admitted to the following program(s): 31-405-1 Auto Collision Rpr & Ref Tech.

405-382 Paint Technology **2 cr**
 Automotive refinishing basics includes history of automotive refinishes, paint shop equipment, safety, undercoats, solvents, top coats, problems and solutions. Color matching and blending includes color theory, appearance factors, types of finishes, preparation for painting, equipment and painting area, color testing, color blending and detailing using introductory I-CAR course materials.
 Restricted to students admitted to the following program(s): 31-405-1 Auto Collision Rpr & Ref Tech.

410-Carpentry

410-390 Exploratory Construction **1 cr**
 This course is designed for high school students, preferably Juniors and Seniors as well as other individuals interested in the construction trade. The different career paths available in the industry will be explored and industry leaders will come in and discuss the future of the industry with the students. Basic construction skills including safety, floor framing, wall framing, and exterior finish carpentry will be explored during the course. "Green" building methods and benefits will be explored during the course. The students will tour a new "Energy Star" and "Green Built" home during the course. At the conclusion of the course the students should have a greater knowledge of what the construction industry has to offer as a future career.

412-Combustion Engines

412-305 Truck Chassis I **5 cr**
 This course will introduce the student to the diesel/heavy duty truck repair business. Vehicle safety, driving practices, truck servicing, and wheel end repair, along with hydraulic brakes, air brakes, and air brake systems will be the subject material. A tool kit is required by each student in this course.
 Co-requisite(s): 412-306 Truck Chassis II. Restricted to students admitted to the following program(s): 32-412-1 Diesel/Heavy Equip. Technician.

412-306 Truck Chassis II **5 cr**
 This course will study front-end geometry, alignment, steering, and suspensions as it pertains to light- and heavy-duty trucks. Also studied will be clutches, drivelines, coupling, and 5th wheel operation. A tool kit is required by each student in this course.
 Co-requisite(s): 412-305 Truck Chassis I.

412-307 Chassis Electrical **5 cr**
 This course will study all aspects of electrical systems found on heavy-duty trucks. Battery testing, lighting, starting, charging, in-dash controls, schematic interpretation, and troubleshooting techniques using a digital multi-meter will be practiced. A tool kit is required by each student in this course.

Prerequisite(s): 412-306 Truck Chassis II. Co-requisite(s): 412-308 Mechanical Gear Trains and 412-309 Air Conditioning/Refrigeration.

412-308 Mechanical Gear Trains **4 cr**
 This course introduces the student to rear axle, power divider, and manual transmission concepts. The student will study gear ratios, gear types, gear train configurations, failure analysis, standard servicing requirements, and practice the rebuilding techniques for each major brand. A tool kit is required by each student in this course.

Prerequisite(s): 412-306 Truck Chassis II. Co-requisite(s): 412-307 Chassis Electrical and 412-309 Air Conditioning/Refrigeration.

412-309 Air Conditioning/Refrigeration **3 cr**
 This course is designed to familiarize the student with basic air conditioning/heating concepts and diagnostic procedures as used with heavy-

Course Descriptions

duty trucks and other heavy equipment. The course will focus on A/C concepts, federal and state requirements, component operation, controls, and service procedures such as recovery, evacuation, and charging. Transport refrigeration diagnostic concepts and service procedures as used on refrigerated trailers will also be studied. A tool kit is required by each student in this course.

Prerequisite(s): 412-306 Truck Chassis II. Co-requisite(s): 412-307 Chassis Electrical and 412-308 Mechanical Gear Trains.

412-310 Diesel Engine Oper & Tune-up 4 cr

This course will introduce the student to the mechanical diesel engine. The student will study engine operating fundamentals, basic theory of combustion, mechanical controls, and fuel injection systems. Emphasis will be on engine tune-up and testing with proper diagnostic procedures. A tool kit is required by each student in this course.

Prerequisite(s): 412-309 Air Conditioning/Refrigeration. Co-requisite(s): 412-311 Applied Mobile Hydraulics and 412-312 Intro to Electronic Control.

412-311 Applied Mobile Hydraulics 2 cr

This course will provide the application of basic hydraulic principles into typical mobile hydraulic circuits. The student will experience activities with basic hydraulic components including, disassembly and assembly of valves, pump, and cylinder. Servicing and preventive maintenance will be performed on trucks and other equipment. A tool kit is required by each student in this course.

Prerequisite(s): 412-309 Air Conditioning/Refrigeration. Co-requisite(s): 412-310 Diesel Engine Oper & Tune-up and 412-312 Intro to Electronic Control.

412-312 Intro to Electronic Control 4 cr

This course will introduce the student to the basic electronic control systems that are integrated into the modern heavy -duty truck. The student will study electronic engine systems and electronic transmission systems. Schematic interpretation, troubleshooting techniques using a digital multi-meter, service manual and scan tools will be practiced. A tool kit is required by each student in this course.

Prerequisite(s): 412-309 Air Conditioning/Refrigeration. Co-requisite(s): 412-310 Diesel Engine Oper & Tune-up and 412-311 Applied Mobile Hydraulics.

412-313 Diesel Engine Overhaul 5 cr

This course will study heavy-duty diesel engine rebuild. Diagnostic and disassembly procedures, evaluation of worn parts, component rebuilding, reassembly and testing procedures including power concepts and dynamometer run-in. Operation and troubleshooting of cooling and lubrication systems. A tool kit is required by each student in this course.

Prerequisite(s): 412-312 Intro to Electronic Control. Co-requisite(s): 412-314 Electronic Diagnostics and 412-315 Preventive Maintenance.

412-314 Electronic Diagnostics 4 cr

This course will advance the student's ability in electronic diagnostics with the use of electronic software for engine and transmission troubleshooting. The student will be using skills learned in the program to diagnose active and inactive codes, system reprogramming, and intermittent codes. A tool kit is required by each student in this course.

Prerequisite(s): 412-312 Intro to Electronic Control. Co-requisite(s): 412-313 Diesel Engine Overhaul and 412-315 Preventive Maintenance.

412-315 Preventive Maintenance 1 cr

This course will offer the student a change to show the instructor his or her ability to perform general and/or major preventive maintenance/repair on a heavy-duty truck. Task may include any area that was covered in the program. A tool kit is required by each student in this course.

Prerequisite(s): 412-312 Intro to Electronic Control. Co-requisite(s): 412-313 Diesel Engine Overhaul and 412-314 Electronic Diagnostics.

412-320 Diesel Equipment Service Mgmt 2 cr

This course provides the student with practical aspects of managing a fleet or repair business. Special concentration is placed on current OEM software, preventive maintenance, DOT annual inspections, OSHA, DNR/EPA laws and regulations. Course work will be presentations, written reports, and computer lab work.

412-345 Basic DC Electricity 2 cr

This course introduces the student to DC electrical and electronic circuitry as it applies to heavy-duty trucks. The course will focus on characteristics of electricity, series circuits, parallel circuits, soldering, ohm's law, meter usage/application, and relay operation. These skills will be practiced on training boards in a controlled lab setting. A digital volt/Ohm meter is required by each student in this course.

Restricted to students admitted to the following program(s): 32-412-1 Diesel/Heavy Equip. Technician.

412-380 Diesel Internship 2 cr

This course is designed to provide the student with a purposeful occupational experience in the medium/heavy truck field. Each internship is an individualized experience. A training plan is created for each student in conjunction with the training site and CVTC Diesel Technician Program to provide experience related to the skills and knowledge acquired in the program. Student must be in 4th semester status.

Prerequisite(s): 412-312 Intro to Electronic Control.

413-Electricity

413-303 Elec Power Dist Fund 1A 4 cr

This course introduces the student to basic electrical theory using Ohm's Law to analyze series, parallel and combination circuits. Concepts of work, power, energy, and magnetism will be studied. Students will learn basic line construction materials such as insulator design, pole information, and wire size and resistance, with hands on practice on communication signals for lineworkers. Throughout the course there is an emphasis on safety for lineworkers.

Co-requisite(s): 413-304 Elec Power Dist Fund 1B and 413-305 Elec Power Dist Fund 1C-AppLab. Restricted to students admitted to the following program(s): 31-413-2 Electrical Power Distribution.

413-304 Elec Power Dist Fund 1B 4 cr

This course introduces the student to basic A.C. circuits and advances to A.C. circuits with induction and capacitance. The course includes A.C. parallel circuits with resistance, inductive reactance and capacitive reactance. The student will learn guying and anchoring concepts. CPR and Medic First Aid certification will also be included. Throughout the course there is an emphasis on safety for lineworkers.

Co-requisite(s): 413-303 Elec Power Dist Fund 1A and 413-305 Elec Power Dist Fund 1C-AppLab. Restricted to students admitted to the following program(s): 31-413-2 Electrical Power Distribution.

413-305 Elec Power Dist Fund 1C-AppLab 5 cr

This course introduces the student to power line construction techniques including staking/overhead line design, overhead structure specifications, overhead distribution line construction and stringing/sagging overhead line conductors. The course includes basic hydraulics and line truck operation. Ropes, knots, and splices associated with the lineworker trade will be learned and used throughout the course. Electrical connectors will also be covered. Students will learn aerial climbing tools and techniques. Students will use electrical test equipment and hand and power tools associated with the lineworker trade. Throughout the course there is an emphasis on safety for lineworkers.

Co-requisite(s): 413-303 Elec Power Dist Fund 1A and 413-304 Elec Power Dist Fund 1B. Restricted to students admitted to the following program(s): 31-413-2 Electrical Power Distribution.

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413-306 Elec Power Dist Fund 2A

4 cr

This course introduces the theory of three-phase electrical power systems, including wye and delta systems. Students will study single- and three-phase transformer; construction, principles of operation, connections as well as secondary power supply systems. Skills in electrical system grounding principles and over voltage equipment will be developed. Safety topics related to electrical line work will be highlighted.

Prerequisite(s): 413-303 Elec Power Dist Fund 1A and 413-304 Elec Power Dist Fund 1B and 413-305 Elec Power Dist Fund 1C-AppLab. Co-requisite(s): 413-307 Elec Power Dist Fund 2B and 413-308 Elec Power Dist Fund 2C-AppLab.

413-307 Elec Power Dist Fund 2B

4 cr

Introduction to electrical power line apparatus such as; over current equipment, voltage regulators and kilowatt hour meters. Components and functions of an electrical substation, underground distribution systems, street lighting equipment, along with the sources of communication interference from electrical sources. Safety related topics are included.

Prerequisite(s): 413-303 Elec Power Dist Fund 1A and 413-304 Elec Power Dist Fund 1B and 413-305 Elec Power Dist Fund 1C-AppLab. Co-requisite(s): 413-306 Elec Power Dist Fund 2A and 413-308 Elec Power Dist Fund 2C-AppLab.

413-308 Elec Power Dist Fund 2C-AppLab

4 cr

This is a lab class for second semester Electrical Power Distribution. Students will learn and use advanced levels of topics such as; aerial climbing, rope knots and slices, electrical connectors, electrical test equipment, as well as hand tools. Application and installation of various electrical apparatus in a lab environment is completed by the students. Overhead transmission structures are constructed, protective grounding is introduced, and live line work such as; rubber gloving and hot stick use is practiced (de-energized lines). Underground related equipment is introduced including cable terminating tools and cable locating equipment. Students will install UD cable and terminate cable. Students will also operate a modern combination trencher-cable plow. Safety for the various lab activities is stressed.

Prerequisite(s): 413-303 Elec Power Dist Fund 1A and 413-304 Elec Power Dist Fund 1B and 413-305 Elec Power Dist Fund 1C-AppLab. Co-requisite(s): 413-306 Elec Power Dist Fund 2A and 413-307 Elec Power Dist Fund 2B.

419-Indust Hydraulics-Pneumatics

419-116 Basic Hydraulics

3 cr

This course exposes the student to the theories and basic components of hydraulics. Basic component construction and operation is explored. The theory of function is supplemented by hands on disassembly and assembly of actual industrial components. The course is presented in the individual study mode to allow the students flexibility in scheduling their time.

Restricted to students admitted to the following program(s): 31-462-2 Industrial Mechanic.

419-117 Basic Pneumatics

3 cr

This course exposes the student to the theories and basic components of pneumatics. Basic component construction and operation is explored. The theory of function is supplemented by hands on disassembly and assembly of actual industrial components. The course is presented in the individual study mode to allow the students flexibility in scheduling their time.

Restricted to students admitted to the following program(s): 31-462-2 Industrial Mechanic.

419-301 Related Fluid Power

1 cr

Hydraulic and pneumatic industrial fluid power; theory and laboratory

activities including disassembly and assembly of valves, pumps, cylinders; testing, servicing, preventive maintenance.

Co-requisite(s): 412-311 Applied Mobile Hydraulics.

419-318 Hydraulic System Operations

2 cr

This course provides the application of basic hydraulic principles into typical industrial circuits. The student will experience exercises with basic hydraulic components and simple oil systems and how they are applied in circuits. This course is designed to help develop skills in understanding hydraulic components and their interaction to each other in demonstration circuits. The course is presented in the individual study mode to allow the students flexibility in scheduling their time.

Prerequisite(s): 419-116 Basic Hydraulics.

419-319 Pneumatic System Operations

2 cr

This course provides the application of basic pneumatic principles into typical industrial circuits. The student will experience exercises with basic pneumatic components and simple air systems and how they are applied in circuits. This course is designed to help develop skills in understanding pneumatic components and their interaction to each other in demonstration circuits. Vacuum components and air logic systems will be included. The course is presented in the individual study mode to allow the students flexibility in scheduling their time.

Prerequisite(s): 419-117 Basic Pneumatics.

420-Machine Shop

420-150 Machining/CAM

3 cr

This course is designed to give the student an overview of the machining processes to include milling, drilling, turning, and grinding. It will involve working with manuals as well as computerized (CNC) machine tools. The student will also be introduced to CAM software where they will define the part geometry, develop tool paths, and download to the CNC machine to create a part.

420-151 Rapid Prototyping/Product Dev

3 cr

The students will use the information they have learned in the Machining/CAM course to further study and practice the manufacturing concepts as it relates to rapid prototyping/product development. The student will develop the geometry for these parts as well as import geometry from other sources to produce the parts utilizing a 'paperless' manufacturing concept.

Prerequisite(s): 420-150 Machining/CAM.

420-190 Machine Tool Processes

3 cr

Basic machine methods and operations, basics of bench work, drill press and bandsaw operation, operation of the engine lathe, milling techniques, and surface grinders, principles of numerical control and part programming. Must be in 3rd semester status.

Prerequisite(s): 620-156 Industrial Electronics II.

420-300 Machine Shop Theory

1 cr

Broad theoretical background in machine shop practices which includes milling, turning, grinding, and drilling.

420-303 Turning Processes, Adv

4 cr

The student will be expected to hold close tolerances on engine lathes while developing problem-solving techniques associated with the turning process. The student will be exposed to equipment and tooling capable of doing precision work while implementing concepts for rapid material removal. The format for this class is a self-paced lab with a minimum allowable standard established.

Prerequisite(s): 420-301 Machining Processes, Intro to and 420-302 Machining Processes, Inter.

420-304 Milling & Grinding Process, Adv

5 cr

This class requires the student to hold close tolerances on milling ma-

Course Descriptions

chines and surface grinders. In-depth problem-solving techniques associated with these processes are also covered while exploring rapid material removal rates and tooling. The format for this class is a self-paced lab with a minimum allowable standard established.

Prerequisite(s): 420-301 Machining Processes, Intro to and 420-302 Machining Processes, Inter.

420-305 Machining Applications, Adv 4 cr

This class requires the student to utilize all manual and CNC machining processes learned to complete a major project(s). The project(s) must involve precision bores, clearance and press fits, the machining of cast iron, and the assembly of numerous mating parts. The format for this class is a self-paced lab with a minimum allowable standard established.

Prerequisite(s): 420-306 CNC Mill Programming and 420-307 CNC Lathe Programming.

420-306 CNC Mill Programming 4 cr

This course is designed to prepare the student for entry-level skills in programming, setup, and operation of CNC horizontal and vertical mills. Programming examples will be covered using canned cycles, linear and circular interpolation, cutter compensation, subroutines, and multiple fixture offsets. Projects will be assigned and completed using Haas vertical mini mills, Haas VF-E vertical mills and Haas horizontal machining centers with pallet changers. The format for this class is a self-paced lab with a minimum allowable standard established.

Prerequisite(s): 420-303 Turning Processes, Adv and 420-304 Milling & Grinding Process, Adv.

420-307 CNC Lathe Programming 5 cr

This course is designed to prepare the student for entry-level skills in programming, setup, and operation of CNC lathes. Programming examples will be covered using canned cycles, linear and circular interpolation, tool nose radius compensation and progress to the utilization of bar feeders and live tooling. Projects will be assigned and completed using Haas CNC Turning Centers. The format for this class is a self-paced lab with a minimum allowable standard established.

Prerequisite(s): 420-303 Turning Processes, Adv and 420-304 Milling & Grinding Process, Adv.

420-308 Progressive Machining Technqs 5 cr

This course prepares students for industry by exposing them to cutting edge manufacturing techniques. This class is intended to allow the student to utilize their knowledge of the machining processes on state-of-the-art machine tools, while challenging the student to develop a mind frame for maximizing resource capability. Concepts covered in this class are lights-out manufacturing, unattended manufacturing, and just-in-time manufacturing along with exposing the student to the business associated with the trade. The course is designed on a project and application basis.

Prerequisite(s): 420-306 CNC Mill Programming and 420-307 CNC Lathe Programming.

420-321 Manual Turning Processes 5 cr

This course is intended to develop the fundamental skill for a career in the machining trade. Fundamental processes include; Manual Lathe operation, basic set-up, lay-out, measurement, turning processes, and tool geometry/sharpening. This course requires the purchase of tools and measuring equipment required for working in the Machine Tool lab.

Co-requisite(s): 420-322 Manual Milling Processes. Restricted to students admitted to the following program(s): 32-420-5 Machine Tooling Technics.

420-322 Manual Milling Processes 5 cr

This course expands on the fundamental skills of the machine shop by broadening the student's knowledge base with; Manual mill operation, basic set-up, layout, measurement, drilling and milling processes along with using a variety of milling cutters.

Co-requisite(s): 420-321 Manual Turning Processes. Restricted to students admitted to the following program(s): 32-420-5 Machine Tooling Technics.

420-325 Basic CNC Mill Programming 5 cr

This course is designed to prepare the student for entry-level skills in programming, setup, and operation of CNC milling machines. Repetitive operational tasks will be performed so students acquire knowledge and skill in setting-up and operating CNC milling machines. Students will develop and apply skills in setting and testing work and tool offsets, performing manual data input functions, loading programs, and the running of proven CNC programs. Programming examples include using canned cycles, linear and circular interpolation, cutter compensation, subroutines, and multiple fixture offsets, etc. Projects will be assigned and completed using Haas Mini and VF series vertical mills.

Prerequisite(s): 420-321 Manual Turning Processes and 420-322 Manual Milling Processes. Co-requisite(s): 420-326 Adv CNC Mill & Grinding Proc. Restricted to students admitted to the following program(s): 32-420-5 Machine Tooling Technics.

420-326 Adv CNC Mill & Grinding Proc 5 cr

This course is designed to expand on a student's foundational skills in programming, setup, and operation of CNC milling machines and surface grinders. Students will develop and apply setup and programming skills using machining centers. Students will also utilize the grinding process to perform secondary operations on in-process parts. Projects will be assigned and completed using Haas machining centers.

Prerequisite(s): 420-321 Manual Turning Processes and 420-322 Manual Milling Processes. Co-requisite(s): 420-325 Basic CNC Mill Programming.

420-330 Basic CNC Lathe Programming 5 cr

This course is designed to prepare the learner for entry-level skills in operation, setup, and manual programming of CNC lathes. Repetitive operational tasks will be performed by students to acquire knowledge and skills in operation and setup of CNC lathes. Programming examples will be covered using canned cycles, linear, and tool nose radius compensations. Projects will be assigned and completed using Haas CNC Turning Centers.

Prerequisite(s): 420-321 Manual Turning Processes and 420-322 Manual Milling Processes. Co-requisite(s): 420-331 Advanced CNC Turning Processes.

420-331 Advanced CNC Turning Processes 5 cr

This course is designed to expand your foundational skills in programming, setup, and operation of CNC turning centers. You will develop and apply setup and programming skills using CNC turning centers with live tooling capabilities. Programming examples will be covered using advanced programming techniques. Projects will be assigned and completed using Haas CNC Turning Centers.

Prerequisite(s): 420-321 Manual Turning Processes and 420-322 Manual Milling Processes. Co-requisite(s): 420-330 Basic CNC Lathe Programming. Restricted to students admitted to the following program(s): 32-420-5 Machine Tooling Technics.

420-341 Materials for Machinists 2 cr

During this course individuals will learn the terminology relating to the mechanical, physical, and chemical properties of materials used for Machine Tooling Technics. Materials covered will be the classification of steel, cast iron, aluminum, copper, and polymers. Lab activities will include hardening, annealing, case hardening, destructive test, non-destructive test, casting, molding, welding, and gluing of materials.

Prerequisite(s): 420-321 Manual Turning Processes and 420-322 Manual Milling Processes.

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420-346 Related Machine Tool Concepts	2 cr	Prerequisite(s): 420-301 Machining Processes, Intro to and 420-302 Machining Processes, Inter.
Skill development in use of lathe, drill press, and other machine shop equipment; safety and proper shop procedures emphasized.		
420-347 Related Machine Tool	2 cr	420-373 Precision Measurement 1 cr
Use of lathe, drill press and other machine shop equipment; sharpening drills; removing studs; using machine hand tools; safety; proper shop procedures.		This course will provide the theory, technique, and care of the coordinate measuring machine (CMM) and various measuring instruments. The student will apply blueprint reading skills and geometric tolerancing to projects made in the machine shop while applying measuring techniques used with the CMM and basic measuring instruments. The student will be exposed to precision inspection methods as it relates to industrial blueprints, manufactured parts, and the student's projects.
420-351 Advanced CAD/CAM	3 cr	Prerequisite(s): 421-385 Machine Trades Blueprint Rdg (or taken concurrently). Restricted to students admitted to the following program(s): 32-420-5 Machine Tooling Technics.
This course will provide the student with a basic knowledge of a Windows based CAD and CAM software (Solid Works and Master Cam). The purpose of this course is to utilize the software to create solid models, import and export files, create tool paths utilizing the feature based machining technologies and explore processing strategies. This course is designed to prepare the student to work with advanced technologies in the integration of Solid Works and Master Cam software.		
Prerequisite(s): 420-367 3-D CAM. Restricted to students admitted to the following program(s): 32-420-5 Machine Tooling Technics.		
420-352 Advanced Technologies in Mfg	5 cr	420-375 Toolmaking Theory 1 cr
In this course the student will learn theories and concepts that will include Work Piece Processing, High Performance Machining, Electrical Discharge Machining (EDM), Fixture Creation, Advanced Measurement Techniques, Advanced Tooling Setup Techniques, and Program Optimization. Prerequisite(s): 420-326 Adv CNC Mill & Grinding Proc and 420-331 Advanced CNC Turning Processes and 420-353 CAM for CNC Lathe and 420-367 3-D CAM. Co-requisite(s): 420-355 Competitive Machining Techniqs.		Toolmaking Theory is a lecture and demonstration course which introduces students to basic toolmaking theories to include; mold and die components and construction principles, jig and fixture making, precision surface grinding, electrical discharge machining (EDM), precision holes, and precision setup and measurement. This course will support shop activities for the fourth semester lab classes in the Machine Tool Technics Program.
420-353 CAM for CNC Lathe	2 cr	420-379 Job Skills for Manufacturing 1 cr
In this course students will acquire knowledge and skills in MasterCam Lathe concepts. Students will develop and apply skills in creating part geometry, generate tool paths using facing, rough, finish, groove, thread, drilling, cut-off, and lathe live tooling. Students will complete examples presented and be assigned similar projects to reinforce the material presented. Prerequisite(s): 420-380 2-D CAM. Co-requisite(s): 420-330 Basic CNC Lathe Programming.		Develop skills in preparation of manufacturing trades job search to include; a resume, employment application form, letter of job inquiry, and thank you letter following an employment interview. The learner will develop a job portfolio for the manufacturing trades to include documents and pictures of educational and work experience.
420-355 Competitive Machining Techniqs	5 cr	420-380 2-D CAM 2 cr
The focus of this course is productivity-based, using the machine tools available in the machine shop lab. The application projects will focus on applying advanced machining techniques to practice. The theories that will be applied in this course will include High Speed Machining (HSM), Hard Milling, Live Tooling on the Lathe, Electrical Discharge Machining(EDM), Fixture Creation, and Program Optimization. Another component of this course is time utilization. Time utilization is very important to you and your future employer which means that all projects will be time sensitive to reinforce productivity.		2-D CAM is a two-credit course that is offered by the Machine Tool Department at Chippewa Valley Technical College. This course will provide the student with a basic knowledge of a Windows environment computer workstation and CAD-CAM software. The purpose of this course is to develop the skills of print interpretation, geometry generation, dimensioning, and both virtual and conventional machining of part geometry to print specifications. 2-D CAM is a one-semester (64-hour) course and is intended for entry-level machine tool programmers. This is a laboratory-based course that consists of hands-on activities. Enrollment by instructor consent.
Prerequisite(s): 420-326 Adv CNC Mill & Grinding Proc and 420-331 Advanced CNC Turning Processes. Co-requisite(s): 420-352 Advanced Technologies in Mfg. Restricted to students admitted to the following program(s): 32-420-5 Machine Tooling Technics.		Prerequisite(s): 420-370 CNC Operations (or taken concurrently).
420-367 3-D CAM	3 cr	420-381 CAD/CAM for Swiss 3 cr
Basic operation of computer-aided drafting and its links to the computer-aided machining processes used in modern manufacturing; class approach combines design and manufacture of a product. Enrollment by instructor consent.		Students will use Esprit CAD/CAM software to aid in the design and manufacturing of parts on the CNC Swiss turning machine. Programs will consist of basic turning, mill/turn, and pick off with multiple spindles. Parts will be machined both on the Swiss machine and virtually with the simulation component of the software.
Prerequisite(s): 420-380 2-D CAM.		Prerequisite(s): 420-382 Swiss I and 420-383 Swiss II. Restricted to students admitted to the following program(s): TC-420-1 Advanced Machining - Swiss, 32-420-5 Machine Tooling Technics.
420-370 CNC Operations	2 cr	420-382 Swiss I 3 cr
Operation of CNC machine tools, including CNC milling machines, turning centers, and machining centers. Emphasis on safety, start-up, set-up, loading, and efficient operation. Enrollment by instructor consent if not currently enrolled in the program.		This course will introduce the student to the Swiss screw machine concept and operations fundamentals. Emphasis will be placed on the skill development for basic Swiss processes and operation of the Citizen Swiss screw machine. The course will include performance competencies for machine setup, load proven part programs, setting tools, adjusting offsets, and the set up of an automatic bar feeder for automated manufacturing.
		Prerequisite(s): 420-326 Adv CNC Mill & Grinding Proc and 420-331 Advanced CNC Turning Processes and 420-367 3-D CAM. Restricted to students admitted to the following program(s): TC-420-1 Advanced Machining - Swiss, 32-420-5 Machine Tooling Technics.

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- 420-383 Swiss II** **3 cr**
This course will prepare the student for manual and software assisted programming of a Swiss style machine tool. The content will cover G and M codes specific for Swiss programming programming, synchronized programming techniques for multispindle machines, editing programs, process optimization, and problem solving for Swiss machine tools.
Prerequisite(s): 420-382 Swiss 1. Restricted to students admitted to the following program(s): TC-420-1 Advanced Machining - Swiss, 32-420-5 Machine Tooling Technics.
- 420-385 Advanced Machine Concepts** **3 cr**
Development and machining of a part using the computer assist, menu-driven software systems used for short run jobs in a job shop atmosphere. Operation of controls on CNC machine tools equipped with menu-driven software to produce short run jobs.
Prerequisite(s): 420-380 2-D CAM.
- 420-399 Independent Study-Machine Tool** **3 cr**
Students will work under the directions of the designated instructor. Projects will be based on the application of previously learned concepts and new concepts. Students will be able to have a hands-on approach.
- 442-Welding**
- 442-301 Metallurgy** **2 cr**
The purpose of this course is to help students acquire basic metallurgy knowledge that will be useful in their welding careers. The students will study the types and uses of steel; modification and prediction of metal behavior; crystalline structure before and after modification; lab work focuses on using the knowledge gained.
- 442-303 Metals Technology 1** **1 cr**
Introduces the student to a variety of technical topics related to the Welding program. Topics will include: machine settings, wire and electrode designations, drilling operations, data sheet interpretation, structural steel methods, maintenance of welding equipment, etc. Discussion will also take place on issues such as work ethics and job/work attitudes.
- 442-304 Metals Technology 2** **1 cr**
Continuation of Metals Technology 1, 442-303, expanding on and covering a variety of technical topics related to the Welding program. Topics will include: welding theory, wire and electrode designations and selection, Welding Procedure Specification (WPS) interpretation, Welder certifications, AWS & ASME code requirements and work standards, etc. Discussion will also take place on issues such as work ethics, job/work attitudes and employer expectations. Restricted to students admitted to the following program(s): 31-442-1 Welding.
Prerequisite(s): 442-303 Metals Technology 1. Restricted to students admitted to the following program(s): 31-442-1 Welding.
- 442-313 Welding-Automotive Technician** **1 cr**
The purpose of this course is to help the students acquire basic welding skills on light gauge metals and other materials used in the automobile industry by using oxyacetylene welding, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), and plastic welding. It is a hands-on, self-paced learning environment to learn basic welding skills and safe welding practices.
Restricted to students admitted to the following program(s): 32-404-2 Automotive Technician, 31-404-3 Automotive Maint Tech.
- 442-314 Related Welding** **2 cr**
The basis of oxyacetylene, arc and wirefeed welding are covered. Laboratory work is performed to develop basic skills and learn safe welding work habits.
- 442-314A Related Welding, Marine** **2 cr**
The purpose of this course is to help the students acquire the basic welding skills in oxyacetylene welding, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW), and Plastic Welding. It is a hands-on self-paced learning environment to learn basic welding skills and safe welding practices.
Restricted to students admitted to the following program(s): 31-461-2 Motorcycle, Marine & Ou.
- 442-314B Related Welding for Diesel** **2 cr**
The purpose of this course is to help the students acquire the basic welding skills in oxyacetylene welding, Shielded Metal Arc Welding (SMAW), and Gas Metal Arc Welding (GMAW). It is a hands-on self-paced learning environment to learn basic welding skills and safe welding practices.
Restricted to students admitted to the following program(s): 32-412-1 Diesel/Heavy Equip. Technician.
- 442-314C Related Weld, Industrial Mech** **2 cr**
The purpose of this course is to help the students acquire the basic welding skills in oxyacetylene welding, Shielded Metal Arc Welding (SMAW), and Gas Metal Arc Welding (GMAW). It is a hands-on self-paced learning environment to learn basic welding skills and safe welding practices.
Restricted to students admitted to the following program(s): 31-462-2 Industrial Mechanic.
- 442-315 Welding for Autobody** **2 cr**
High strength steel is used in unibody construction; vehicle manufacturers mandate MIG welding be used on repair of all structural parts. Substantial time is devoted to light gauge metals welded with small diameter wire using a MIG welder.
- 442-315A Welding for Auto Collision** **2 cr**
The purpose of this course is to help the students acquire basic welding skills on light gauge metals and other materials used in the automobile industry by using oxyacetylene welding, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), and plastic welding. It is a hands-on self-paced learning environment to learn basic welding skills and safe welding practices. May get into course with instructor approval if you are not a program or pre-program student.
Restricted to students admitted to the following program(s): 31-405-1 Auto Collision Repair.
- 442-315B Welding for Auto Maint Tech** **2 cr**
The purpose of this course is to help the students acquire basic welding skills on light gauge metals and other materials used in the automobile industry by using oxyacetylene welding, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), and plastic welding. It is a hands-on self-paced learning environment to learn basic welding skills and safe welding practices.
Restricted to students admitted to the following program(s): 31-404-3 Automotive Maintenance Tech.
- 442-320 Related Welding, Advanced** **2 cr**
Advanced techniques including out-of-position arc and oxy-acetylene welding; TIG and MIG welding of aluminum and stainless steel.
Prerequisite(s): 442-314 Related Welding.
- 442-320A Related Welding Diesel, Adv** **2 cr**
The purpose of this course is to help the students acquire advanced welding skills in oxyacetylene welding, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), and Gas Tungsten Arc Welding (GTAW). It is a hands-on self-paced learning environment to learn advanced welding skills and safe welding practices.
Prerequisite(s): 442-314B Related Welding for Diesel. Restricted to students admitted to the following program(s): 32-412-1 Diesel/Heavy Equip. Technician.

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442-320B Related Welding, Ind Mech Adv 2 cr

The purpose of this course is to help the students acquire advanced skills in oxyacetylene welding, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW), and plastic welding utilized in the Industrial Mechanics area. It is a hands-on self-paced learning environment to acquire advanced welding skills and safe welding practices .

Prerequisite(s): 442-314C Related Weld, Industrial Mech. Restricted to students admitted to the following program(s): 31-462-2 Industrial Mechanic.

442-330 Arc & Oxy-Acetylene Welding I 1 cr

Students will learn fundamentals of welding; welding safety, welding terms, equipment, five basics of good welds, weld types, weld positions, weld quality, electrode and material identification. Students will acquire basic fundamental skills in oxy-acetylene (OAW) welding, cutting and arc (SWAW, stick) welding. Safety glasses are required.

442-331 Wire Feed & TIG Welding I 1 cr

Students will learn fundamentals of welding; welding safety, welding terms, equipment, five basics to good welds, weld types, weld positions, weld quality, electrode and material identification. Students will acquire basic fundamental skills in wire feed welding (GMAW, MIG) and gas tungsten arc welding (GTAW, TIG, heli-arc). Safety glasses are required.

442-350 Basic Pipe Welding 5 cr

Basic pipe welding skills; several types of welds are made in different positions using stick electrodes, wire feed (MIG) and (TIG) welding of stainless steel pipe. (8 weeks)

Prerequisite(s): 442-363 Adv Wire Feed & Arc Welding (or taken concurrently) and 442-364 Gas Tungsten Arc Welding (or taken concurrently). Restricted to students admitted to the following program(s): 31-442-1 Welding.

442-360 Robotic Welding 2 cr

Safety; setup; programming; and operation of a welding robot. Variables and problems will be studied and solutions applied to provide a practical, efficient application of the GMAW (gas metal arc welding) process to an automated system.

Prerequisite(s): 442-363 Adv Wire Feed & Arc Welding (or taken concurrently) and 442-364 Gas Tungsten Arc Welding (or taken concurrently). Restricted to students admitted to the following program(s): 31-442-1 Welding.

442-360A Robotic Welding A 1 cr

Safety; setup; programming; and operation of a welding robot. Variables and problems will be studied and solutions applied to provide a practical, efficient application of the GMAW (gas metal arc welding) process to an automated system. This is the first half of a 2-credit course, and both parts must be taken in order to complete the Robotic Welding requirement for the Welding program.

Prerequisite(s): 442-363 Adv Wire Feed & Arc Welding (or taken concurrently) and 442-364 Gas Tungsten Arc Welding (or taken concurrently). Restricted to students admitted to the following program(s): 31-442-1 Welding.

442-360B Robotic Welding B 1 cr

Safety; setup; programming; and operation of a welding robot. Variables and problems will be studied and solutions applied to provide a practical, efficient application of the GMAW (gas metal arc welding) process to an automated system. This is the second half of a 2-credit course, and both parts must be taken in order to complete the Robotic Welding requirement for the Welding program.

Prerequisite(s): 442-360A Robotic Welding A and 442-363 Adv Wire Feed & Arc Welding (or taken concurrently) and 442-364 Gas Tungsten

Arc Welding (or taken concurrently). Restricted to students admitted to the following program(s): 31-442-1 Welding.

442-361 Basic Oxy-Acetylene & Arc Weld 5 cr

Basic welding; design and selection of welding processes; laboratory experience to develop skills in oxyacetylene and basic Shielded Metal Arc Welding (SMAW, arc welding, stick welding); metal cutting procedures. This course requires the purchase of approximately \$440 in tools and equipment.

Prerequisite(s): 421-386 Welding-Blueprint Reading (or taken concurrently). Restricted to students admitted to the following program(s): 31-442-1 Welding.

442-362 Basic Wire Feed & Int Arc Weld 4 cr

Introduction to Gas Metal Arc Welding (GMAW, wire feed welding, MIG) and a continuation of basic Shielded Metal Arc Welding (SMAW, arc welding, stick welding). Develop skills with solid wire GMAW in various positions and joint designs. Refine and develop new skills in Shielded Metal Arc Welding (SMAW), arc welding, stick welding) in out-of-position plate welding using fast freeze, low hydrogen and iron powder electrodes.

Prerequisite(s): 421-386 Welding-Blueprint Reading (or taken concurrently) and 442-361 Basic Oxy-Acetylene & Arc Weld (or taken concurrently). Restricted to students admitted to the following program(s): 31-442-1 Welding.

442-363 Adv Wire Feed & Arc Welding 5 cr

Continuation of Basic Wire feed and Intermediate Arc Welding; advanced Shielded Metal Arc Welding (SMAW, arc welding, stick welding); out-of-position plate and structure welding using fast freeze, low hydrogen and iron powder electrodes. Gas Metal Arc Welding (GMAW, wire feed welding, MIG) using Fluxcored wire, aluminum and stainless steel wire on various metals and joint designs. Destructive and nondestructive testing methods; welding codes and certification; manual plasma arc cutting.

Prerequisite(s): 442-362 Basic Wire Feed & Int Arc Weld (or taken concurrently). Restricted to students admitted to the following program(s): 31-442-1 Welding.

442-364 Gas Tungsten Arc Welding 4 cr

Gas Tungsten Arc Welding (GTAW, TIG), of aluminum, stainless steels and carbon steels. Weld exercises performed on all three types of material in various positions and joint designs. Purge welding of stainless steel pipe both in the fixed position and rolled flat position.

Prerequisite(s): 442-362 Basic Wire Feed & Int Arc Weld (or taken concurrently). Restricted to students admitted to the following program(s): 31-442-1 Welding.

442-365 Welding Rigging/Forklift Trng 2 cr

This course is for welding program students to gain knowledge and hands-on experience in several industrial topics of the welding field. The use of jib cranes and the rigging involved for lifting or moving materials and working safely around different types of cranes both in a shop environment and in the field. Forklift training and safety issues for operating a forklift on the job site. The students will discuss OSHA safety requirements for the welding industry and participate in fire extinguisher training. Discussion of lean manufacturing processes and issues utilized in today's manufacturing industry.

Restricted to students admitted to the following program(s): 31-442-1 Welding.

442-370 CNC Welding Processes 1 cr

Students will obtain the knowledge of operating different CNC metal fabrication equipment that pertains to the welding industry. Emphasis will be placed on safety, start-up, loading, and efficient operation of the CNC plasma table, CNC shear, CNC break press, and other related

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equipment.

Prerequisite(s): 457-380 Layout and Fabrication I (or taken concurrently). Restricted to students admitted to the following program(s): 31-442-1 Welding.

457-Metal Fabrication

457-380 Layout and Fabrication I 2 cr

Gain skills in laying out projects from shop sketches or blueprints used in the welding industry; development of templates or patterns and various shop shortcuts. Use related machine operations and equipment to fabricate and assemble projects.

Prerequisite(s): 421-386 Welding-Blueprint Reading (or taken concurrently). Restricted to students admitted to the following program(s): 31-442-1 Welding.

457-381 Layout and Fabrication II 2 cr

This is a continuation of 457-380 Layout and Fabrication I, meant to develop layout and problem-solving skills with more complex projects and design work. Make parts using computerized shape cutting machine operation with oxyacetylene and plasma arc processes; which will then be assembled, welded, and ground off prior to painting.

Prerequisite(s): 457-380 Layout and Fabrication I. Restricted to students admitted to the following program(s): 31-442-1 Welding.

458-Commercial Driving

458-320 CDL License Training 1 cr

This course will prepare the student for taking both the written portion and practical Commercial Driver's License (CDL) test. Students will take the written test at the Department of Motor Vehicles (DMV) test center. The CDL driving test can be taken at the DMV test center or CVTC.

Restricted to students admitted to the following program(s): 31-413-2 Electrical Power Distribution, 10-006-3 Agriscience Technician, 10-001-1 Landscape Plant Turf Mgmt, 32-412-1 Diesel/Heavy Equip. Technician.

458-341 Truck Driving 1 4 cr

Covers the laws pertaining to the operation of a commercial motor vehicle (CMV). This course also focuses on how to properly inspect a CMV and how to operate one safely. Each student progresses according to his or her own abilities with the assistance of an instructor. Student must be 18 years of age when class begins. This course is not eligible for financial aid.

Co-requisite(s): 458-342 Truck Driving 2 and 458-343 Truck Driving 3 and 458-344 Truck Driving 4. Restricted to students admitted to the following program(s): 30-458-1 Truck Driving.

458-342 Truck Driving 2 3 cr

Focuses on understanding the paperwork connected with the trucking industry. This course also covers communication skills and security issues. Student must be 18 years of age when class begins. This course is not eligible for financial aid.

Co-requisite(s): 458-341 Truck Driving 1 and 458-343 Truck Driving 3 and 458-344 Truck Driving 4. Restricted to students admitted to the following program(s): 30-458-1 Truck Driving.

458-343 Truck Driving 3 3 cr

Further prepares students to obtain a commercial driver's license. Learners have the opportunity to plan trips and manage loading procedures. Weight distribution techniques and security issues are also discussed. Student must be 18 years of age when class begins. This course is not eligible for financial aid.

Co-requisite(s): 458-341 Truck Driving 1 and 458-342 Truck Driving 2 and 458-344 Truck Driving 4. Restricted to students admitted to the following program(s): 30-458-1 Truck Driving.

458-344 Truck Driving 4 2 cr

Focuses on continuous improvement. This course is designed for students who have successfully obtained a commercial driver's license. Operating skills and the role of a professional truck driver are stressed. Student must be 18 years of age when class begins. This course is not eligible for financial aid.

Co-requisite(s): 458-341 Truck Driving 1 and 458-342 Truck Driving 2 and 458-343 Truck Driving 3. Restricted to students admitted to the following program(s): 30-458-1 Truck Driving.

458-370 Tractor Trailer 2 cr

This on-line course is 32 modules of semi tractor-trailer training to include orientation, control systems, vehicle systems, vehicle inspection, basic control, shifting, backing, coupling/uncoupling, visual search, communication, speed & space management, night & extreme driving, hazards, railroad crossings, emergency maneuvers, skid control & recovery, special rigs, preventative maintenance, diagnosing & reporting-malfunctions, handling & documenting cargo, hazardous materials, hours of service, international driving, trip planning, accident procedures, security, personal health & safety, public & employer relationships, and basic business practices.

461-Small Engine & Chassis Mechanic

461-310 Basic Engines/Systems,Intro to 5 cr

This course is a prerequisite for all snowmobile/ATV, marine outboard, and marine inboard courses. It includes safety, precision instruments and engine basics, carburetor and EFI theory, service and testing, electrical and ignition theory, and service procedures. Factory certification is obtained on Briggs and Stratton power equipment. This course requires the purchase of approximately \$1,500 in tools and/or equipment.

Prerequisite(s): 461-312 Engine Theory 1 (or taken concurrently). Restricted to students admitted to the following program(s): 31-461-2 Motorcycle, Marine & Ou.

461-312 Engine Theory 1 2 cr

This course will provide the student with basic knowledge of concepts and principles in the design and operation of small engines. Students will study the material corresponding with the type of engine class they are enrolled in.

Prerequisite(s): 461-310 Basic Engines/Systems, Intro to (or taken concurrently).

461-313 Engine Theory 2 2 cr

This course is a continuation of Engine Theory 1. Students will receive instruction that corresponds with the type of engine class they are currently enrolled in.

Prerequisite(s): 461-310 Basic Engines/Systems, Intro to (or taken concurrently) and 461-312 Engine Theory 1 (or taken concurrently).

461-314 Engine Theory 3 1 cr

This course is a continuation of Engine Theory 1 and Engine Theory 2. Students will receive instruction that corresponds with the last type of engine class required to complete the program.

Prerequisite(s): 461-310 Basic Engines/Systems, Intro to (or taken concurrently) and 461-312 Engine Theory 1 (or taken concurrently).

461-320 Snowmobiles & ATVs 5 cr

This course is designed to give the student the fundamentals of the snowmobile/ATV fuel, electrical, clutch, chassis, engine, and tune-up of a snowmobile/ATV. It covers integral and external fuel pump types, both engine and chassis electrical systems, drive and driven clutch assemblies,

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front- and rear-suspension types, and track assembly service.

Prerequisite(s): 461-312 Engine Theory 1 (or taken concurrently) and 461-310 Basic Engines/Systems, Intro to (or taken concurrently).

461-330 Marine Outboards **5 cr**

This course will give the student a fundamental understanding of marine and outboard fuel, cooling, power trim unit, gear case assemblies, power-head rebuilding, dyno testing, and ignition systems. The course includes both Mercury and Outboard Marine Corporation fuel, cooling system theory, water pump rebuilding, tank testing, power trim and tilt service and overhaul, gear case rebuilding, shimmiing and testing of various gear cases, disassembly measuring, and reassembly of various powerheads. Students will evaluate horsepower, throttle response, and troubleshooting by dyno testing, point-coil, battery, CDI ignition theory and identification, operating various test equipment, and diagnosing ignition components.

Prerequisite(s): 461-310 Basic Engines/Systems, Intro to (or taken concurrently) and 461-312 Engine Theory 1 (or taken concurrently).

461-340 Marine Inboards **5 cr**

This course is designed to give the student a fundamental understanding of marine inboard/outboard outdrive service. It covers four-cylinder, six-cylinder, and eight-cylinder marine engine tune-up, battery ignition and transistorized ignition systems service and maintenance, service procedures for cylinders, pistons, rings, connecting rods, cylinder heads, and valve trains, complete overhaul of outdrive, shimmiing of gears, dyno testing for performing winterization of powerhead, lower units, fuel systems, and electrical systems.

Prerequisite(s): 461-310 Basic Engines/Systems, Intro to (or taken concurrently) and 461-312 Engine Theory 1 (or taken concurrently).

461-360 Motorcycles **5 cr**

This course is designed to give the student the fundamentals of motorcycle fuel, oil, electrical, clutch, frame, engine, wheels, suspension, and brakes. It covers pre-delivery and maintenance procedures, engine and transmission systems, clutch and belt, chain and shaft drive systems.

Prerequisite(s): 461-310 Basic Engines/Systems, Intro to (or taken concurrently) and 461-312 Engine Theory 1 (or taken concurrently).

462-Industrial Equip Mechanic

462-110 Mechanical Concepts **4 cr**

This course is designed to give the student a basic understanding of the mechanical concepts that are found on industrial equipment. Since all industrial machinery is equipped with some type of mechanical drive, a firm understanding of these drives is necessary for the industrial mechanic. Cleanliness and safe working habits will also be emphasized. Restricted to students admitted to the following program(s): 31-462-2 Industrial Mechanic.

462-311 Mechanical Print Read & Schem **1 cr**

This course allows the student to learn the symbols used in the maintenance industry and to put those symbols into circuits and diagrams. A unit is also given on blueprint reading consisting of basic symbols and reading the dimensions from various blueprints. Simulation software will be used to demonstrate operation of circuits and design.

462-320 Centrifugal Pumps & Alignment **4 cr**

This course is designed to give the student understanding and experience with various types of industrial pumps and drive mechanisms. Basic understanding of centrifugal pumps, theory of operation, installation, maintenance and troubleshooting of pumps and their systems. Students will work with Laser Alignment, and advanced linear slides and brakes and clutches. The course is presented in the individual study mode to allow the students flexibility in scheduling their time.

Prerequisite(s): 419-116 Basic Hydraulics and 419-117 Basic Pneumatics

and (462-110 Mechanical Concepts or 462-310 Mechanical Concepts) and (620-130 Industrial Elec Concepts or 414-343 Industrial Electricity Concept). Restricted to students admitted to the following program(s): 31-462-2 Industrial Mechanic.

462-321 Repair Automated Mfg Equip **4 cr**

This course is designed to give the student understanding and experience with various types of automated equipment. Proper Lock-out & Tag-out and troubleshooting Motors and Motor Drives. The set-up and operation of the machinery and repair of such equipment and components on the equipment will be performed. Projects of function, troubleshooting, and repair will be the prime emphasis. Course is presented in the individual study mode to allow the students flexibility in scheduling their time.

Prerequisite(s): 419-116 Basic Hydraulics and 419-117 Basic Pneumatics and (462-110 Mechanical Concepts or 462-310 Mechanical Concepts) and (620-130 Industrial Elec Concepts or 414-343 Industrial Electricity Concept). Restricted to students admitted to the following program(s): 31-462-2 Industrial Mechanic.

462-322 Preventative & Periodic Maint **2 cr**

This course is designed to give the student the opportunity to research the items to be inspected in a preventive maintenance program. Students develop preventive maintenance schedules and perform actual inspections of mechanical, fluid power, and electrical systems. Techniques for troubleshooting and predictive diagnostics are explored.

Prerequisite(s): 419-116 Basic Hydraulics and 419-117 Basic Pneumatics and (462-110 Mechanical Concepts or 462-310 Mechanical Concepts) and 620-130 Industrial Elec Concepts. Restricted to students admitted to the following program(s): 31-462-2 Industrial Mechanic.

462-323 Industrial Mech Documentation **2 cr**

Course introduces Industrial Mechanics students to the specific documentation for industry (OSHA topics) include maintenance logs, schematics, inspections and repair orders are explored and developed for use on the job site, as well as software tools available to assist in this function. Creation of portfolios for Industrial Mechanics hiring and unique aspects of technical interviews and common practices in hands on testing.

Restricted to students admitted to the following program(s): 31-462-2 Industrial Mechanic.

462-340 Troubleshooting PLC Systems **3 cr**

This course is designed to use the basic and advanced electrical and electronic control devices in control simulated and actual automated industrial machines. Set up, operation, and system troubleshooting will be emphasized. Motor starters, PLC operations, air logic controllers, and electropneumatic components will be investigated.

Prerequisite(s): 419-116 Basic Hydraulics and 419-117 Basic Pneumatics and (462-110 Mechanical Concepts or 462-310 Mechanical Concepts) and (620-130 Industrial Elec Concepts or 414-343 Industrial Electricity Concept). Restricted to students admitted to the following program(s): 31-462-2 Industrial Mechanic.

462-341 Machine Trblsht & Repr, Adv. **2 cr**

This course is designed to give the student understanding and experience in machine troubleshooting. Methods of analyzing equipment failure will be investigated. Techniques for machine repair will be performed with the integration of each of four major disciplines in machine operation. The course is presented in the individual study mode to allow the students flexibility in scheduling their time.

Prerequisite(s): 419-116 Basic Hydraulics and 419-117 Basic Pneumatics and (462-110 Mechanical Concepts or 462-310 Mechanical Concepts) and (620-130 Industrial Elec Concepts or 414-343 Industrial Electricity Concept).

Course Descriptions

475-Construction Worker

475-100 Construction Safety 1 cr

During this course you will start with basic construction language, symbols, and print reading fundamentals. The main emphasis of this course will be to prepare the student to function at the job site when reading and interpreting construction drawings and framing plans. Proper use of the architects scale and understanding the different scales and their uses will be taught.

Restricted to students admitted to the following program(s): 31-475-3 Residential Construction.

475-110 Framing Methods/Bldng the Envlpe 4 cr

This is a first-semester course with an emphasis on residential construction. Fundamentals of planning, layout, and rough framing are basic to the course. This course introduces the student to the basic methods of floor framing with dimensional lumber, joists, and floor trusses. Proper methods of wall framing and sheathing installation are covered. Proper methods of producing a well built air tight home will be covered in this course. It will cover proper home seal up, window and door installation, insulation, ventilation, and the importance of the drainage plane behind the siding. At the conclusion of this course, the students should have developed the skills to frame a structure and apply the "Energy Star and Green Certification" requirements to residential construction.

Prerequisite(s): 475-100 Construction Safety (or taken concurrently).

Co-requisite(s): 475-111 Framing Methods/Bldng the Envl Lab and 475-112 Const Basics & Print Reading and 475-115 Roof Systems and Stairs.

Restricted to students admitted to the following program(s): 31-475-3 Residential Construction.

475-111 Framing Methods/Bldng the Envl Lab 5 cr

Students will develop skills and apply concepts and practices from the areas outlined in the course 475-110 Framing Methods/Building the Envelope. In this course, the installation of the roof system at the onsite project will be done. The main lab project is the construction of a single or multi-family dwelling on a real job site. At the conclusion of this course, students should have developed skills to frame a structure and apply the "Energy Star and Green Certification" requirements to residential construction.

Prerequisite(s): 475-100 Construction Safety (or taken concurrently).

Co-requisite(s): 475-110 Framing Methods/Bldng the Envlpe and 475-112 Const Basics & Print Reading and 475-115 Roof Systems and Stairs.

Restricted to students admitted to the following program(s): 31-475-3 Residential Construction.

475-112 Const Basics & Print Reading 2 cr

During this course you will start with basic construction language, symbols, and print reading fundamentals. The main emphasis of this course will be to prepare the students to function at the job site when reading and interpreting construction drawings and framing plans. Proper use of the architects scales and their uses will be taught. Applied math skills used in the construction industry will be covered as well.

Prerequisite(s): 475-100 Construction Safety (or taken concurrently).

Co-requisite(s): 475-110 Framing Methods/Bldng the Envlpe and 475-111 Framing Methods/Bldng the Envl Lab and 475-115 Roof Systems and Stairs.

Restricted to students admitted to the following program(s): 31-475-3 Residential Construction.

475-115 Roof Systems and Stairs 3 cr

The major emphasis of this course will be on roof systems from hand framing simple gable roofs to advanced intersecting roofs using trusses. The students will calculate the math, layout and cut practice hand framed rafters. They will be involved with many different types of roof problems including hip and valley roof systems. Understanding and installing truss

packages at the on-site project is also included. Stair system's layout and design to proper installation will be covered. Stair terminology and the application of the building codes also taught. The students will calculate, layout and cut practice stair stringers in the lab. Design, layout and installing of the stair systems at the on the on-site projects also included

Prerequisite(s): 475-100 Construction Safety (or taken concurrently).

Co-requisite(s): 475-110 Framing Methods/Bldng the Envlpe and 475-111 Framing Methods/Bldng the Envl Lab and 475-112 Const Basics & Print Reading. Restricted to students admitted to the following program(s): 31-475-3 Residential Construction.

475-120 Finish Carpentry Int/Ext 4 cr

This course introduces the student to the basic methods of selecting and installing interior trim, doors, and cabinets. Layout and installation of finish stair materials and decorative railings will also be taught. Material selection and the product installation requirements will be covered. This course also introduces the student to the basic methods of selecting and installing exterior soffit and wall finishes as well as building decks. Material selections and the different installation requirements will be covered. At the conclusion of this construction of a single or multi-family dwelling on a real job site.

Prerequisite(s): 475-100 Construction Safety and 475-110 Framing Methods/Bldng the Envlpe and 475-111 Framing Methods/Bldng the Envl Lab and 475-112 Const Basics & Print Reading and 475-115 Roof Systems and Stairs.

475-121 Finish Carpentry Int/Ext Lab 5 cr

This course introduces the student to the basic methods of selecting and installing interior trim, doors, and cabinets. Layout and installation of finish stair materials and decorative railings will also be taught. Material selections and the product installation requirements will be covered. This course also introduces the student to the basic methods of selecting and installing exterior soffit and wall finishes as well as building decks. Material selections and the different installation requirements will be covered. At the conclusion of this course, the student should have developed the skills to finish the interior/exterior of most residential buildings.

475-124 Construction Planning 2 cr

Construction planning involves the many facets of residential design and construction. Building standards, design and structural loading is taught. Building requirements for "Energy Star Homes" and "Green Built" certification will be covered in this course. Kitchen planning, window schedules, and reading plot plans and site elevations are taught.

Prerequisite(s): 475-100 Construction Safety and 475-110 Framing Methods/Bldng the Envlpe and 475-111 Framing Methods/Bldng the Envl Lab and 475-112 Const Basics & Print Reading and 475-115 Roof Systems and Stairs.

475-125 Est Residential Construction 2 cr

This course introduces the student to the basic methods of estimating light building construction and develops a system for doing quantity take off of materials. The student should develop skills to complete carpentry materials and labor. Material board feet, square feet and lineal foot pricing will be taught. At the conclusion of this course, the student should have developed the skills to complete preliminary material and labor estimates for residential construction. Prerequisite(s): 475-100 Construction Safety and 475-110 Framing Methods/Bldng the Envlpe and 475-111 Framing Methods/Bldng the Envl Lab and 475-112 Const Basics & Print Reading and 475-115 Roof Systems and Stairs.

Course Descriptions

501-Medical Terminology

501-101 Medical Terminology 3 cr
This course focuses on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms. Emphasis on spelling, definition, and pronunciation. Introduction to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

501-107 Intro to Healthcare Computing 2 cr
Provides an introduction to basic computer functions and applications utilized in contemporary healthcare settings. Students are introduced to the hardware and software components of modern computer systems and the application of computers in the workplace. Emphasizes the use of common software packages, operating systems, file management, word processing, spreadsheet, database, Internet, and electronic mail.

501-308 Pharmacology for Allied Health 2 cr
Introduces students to classifying medications into correct drug categories and applying basic pharmacology principles. Students apply basic pharmacodynamics to identifying common medications, medication preparation, and administration of medications used by the major body systems. Prerequisite(s): (501-101 Medical Terminology or 530-153 Medical Terminology I) and 509-302 Human Body in Health & Disease. Restricted to students admitted to the following program(s): 31-509-1 Medical Assistant.

502-Barbering/Cosmetology

502-170 Barber/Cosmetology Explor Crs 1 cr
Students will learn about careers and opportunities, safety and sanitation. Introduction in shampooing, manicures, braiding, styling, retail, salon operations, makeup, nail art, and other hands-on skills.

502-301 Haircutting 1 2 cr
Topics of this course include: basic techniques and principles used in male and female haircutting techniques, client consultation procedures, safety and sanitation procedures, and professionalism. This course will also introduce basic product knowledge and retail skills. Co-requisite(s): 502-310 Chemical Services 1. Restricted to students admitted to the following program(s): 31-502-1 Barber-Cosmetologist.

502-304 Haircutting 2 3 cr
Topics of this course include: intermediate techniques and principles used in haircutting, ethnic hair cutting techniques, client consultation procedures, safety and sanitation procedures, mustache and beard trim and shave, and identifying face shapes and create appropriate style. Prerequisite(s): 502-301 Haircutting 1 (or taken concurrently). Co-requisite(s): 502-321 Salon Services 1. Restricted to students admitted to the following program(s): 31-502-1 Barber-Cosmetologist.

502-305 Haircutting 3 3 cr
This course will provide students with advanced female and male haircutting techniques, trend cutting techniques, client make-over techniques, safety and sanitation procedures and professionalism. Prerequisite(s): 502-304 Haircutting 2 (or taken concurrently). Co-requisite(s): 102-302 Salon Business Operations and 502-324 Salon Services 4.

502-310 Chemical Services 1 3 cr
Topics of this course include: chemical services that include basic perm waving and basic coloring techniques. Fundamentals of this would include: safety and sanitation procedures, client consultation procedures, shampooing procedures, sectioning, wrapping, basic coloring techniques, temporary color services, semi-permanent color services, permanent hair coloring techniques and hair removal techniques related to facial waxing services.

Co-requisite(s): 502-301 Haircutting 1. Restricted to students admitted to the following program(s): 31-502-1 Barber-Cosmetologist.

502-311 Hair Styling 2 cr
This course provides a general knowledge of the skin, hair and finishing techniques. Fundamentals would include: product knowledge, application of conditioning treatments for hair. Fundamentals will also include: thermal styling techniques, basic braiding, wig styling, extensions, updo techniques, and blow-dry styling. Co-requisite(s): 502-323 Salon Services 3 and 502-330 Facial Services.

502-314 Chemical Services 2 3 cr
Chemical services that include: advanced coloring techniques and chemical relaxing procedures. Fundamentals include: bleaching techniques, tipping and highlighting, color correction techniques, toning techniques, advanced applications, chemical relaxing techniques, product knowledge of thioglycolate and sodium hydroxide relaxer chemicals. Prerequisite(s): 502-310 Chemical Services 1 (or taken concurrently). Co-requisite(s): 104-301 Salon Marketing and 502-322 Salon Services 2.

502-320 Nail Technology 2 cr
Hand and nail care, including nail enhancements, nail care, pedicures, and manicures. Fundamentals will include basic nail terminology, basic acrylics, basic nail design, product knowledge, and safety and sanitation practices. Restricted to students admitted to the following program(s): 31-502-1 Barber-Cosmetologist.

502-321 Salon Services 1 4 cr
This course will provide students with hands-on training using fundamentals of haircutting, perm waving, color, and nail techniques, while practicing safety and sanitation procedures and professionalism. This course will be taught in a lab setting providing barber/cosmetology services to the public. Product knowledge and retail skills will also be practiced.

Prerequisite(s): 502-301 Haircutting 1 (or taken concurrently). Co-requisite(s): 502-304 Haircutting 2. Restricted to students admitted to the following program(s): 31-502-1 Barber-Cosmetologist.

502-322 Salon Services 2 4 cr
This course will provide students with hands-on training using the fundamentals of Salon Services 1 and using intermediate haircutting techniques, advanced coloring techniques, and chemical service procedures, while practicing safety and sanitation procedures and professionalism. This course will be taught in a lab setting providing barber/cosmetology services to the public. Product knowledge and retail skills will also be practiced.

Prerequisite(s): (502-304 Haircutting 2 (or taken concurrently) and 502-321 Salon Services 1 (or taken concurrently)). Co-requisite(s): 104-301 Salon Marketing and 502-314 Chemical Services 2.

502-323 Salon Services 3 4 cr
This course will provide students with hands-on training using the fundamentals of Salon Services 1 and 2, as well as, conditioning and styling techniques. These techniques will also practice safety and sanitation techniques and professionalism. Product knowledge and retail skills will also be practiced.

Prerequisite(s): (502-314 Chemical Services 2 (or taken concurrently) and 502-322 Salon Services 2 (or taken concurrently)). Co-requisite(s): 502-311 Hair Styling and 502-330 Facial Services.

502-324 Salon Services 4 4 cr
This course will provide students with hands-on training using the fundamentals of Salon Services 1, 2, and 3, as well as facial techniques, basic makeup application, and advanced female and male hair cutting techniques.

Prerequisite(s): 502-323 Salon Services 3 (or taken concurrently). Co-

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requisite(s): 102-302 Salon Business Operations and 502-305 Haircutting 3.

502-325 Salon Services 5 **4 cr**

This course will provide students with hands-on applications using the fundamentals of Salon Services 1, 2, 3, and 4, as well as advanced marketing techniques, safety and sanitation, and professionalism.

Prerequisite(s): (502-305 Haircutting 3 (or taken concurrently) and 502-324 Salon Services 4 (or taken concurrently). Co-requisite(s): 502-371 Advanced Salon Operations.

502-330 Facial Services **2 cr**

Topics covered in this course include: facial treatment techniques for facial treatments, packs and/or masks, facial massage movements, basic makeup application and removal, safety and sanitation procedures, and professionalism. Co-requisite(s): 502-311 Hair Styling and 502-323 Salon Services 3.

502-350 B/C Instructor License-Theory **2 cr**

This course will provide the theory portion of the B/C instructor licensing curriculum that is required as a first part of the mandated 150 hours by Wisconsin State Board of B/C. This course will provide knowledge in teaching skills, student evaluation and testing methods, classroom management, developing educational aids, and a dynamic program of study. This class will be taught online. All students must show evidence of holding a Wisconsin B/C practitioner license and must provide documentation of 2,000 hours of work experience in the field.

Co-requisite(s): 502-353 B/C Instructor License-Lab.

502-353 B/C Instructor License-Lab **3 cr**

This 108-hour course will provide the lab portion of the two-course requirement designed to fulfill the mandated 150 hours B/C Instructor licensing curriculum by WI State Board of B/C. Students will acquire skills in classroom management, student communications, counseling, recordkeeping, and safety/first aid. Additionally, students will have practical application on the clinic floor in utilizing teaching techniques. All students must show evidence of holding a WI B/C practitioner license and must provide documentation of 2,000 hours of work experience in the field.

Co-requisite(s): 502-350 B/C Instructor License-Theory.

502-371 Advanced Salon Operations **3 cr**

Topics covered in this course will include: pre-training review, State laws and codes, State Board preparation, salon observations, advanced sales and marketing techniques, safety and sanitation techniques and professionalism.

Prerequisite(s): 102-302 Salon Business Operations and 104-301 Salon Marketing and 502-305 Haircutting 3 and 502-320 Nail Technology and 502-324 Salon Services 4 and 502-330 Facial Services and 806-321 Salon Science. Co-requisite(s): 502-325 Salon Services 5.

503-Fire Technology

503-102 Firefighting Principles **4 cr**

This course includes classroom and practical training sessions on the basic fundamentals needed by entry-level firefighters and meets the objectives of the Wisconsin's Firefighter I certification course. Upon completion, students must pass the certification exam for Firefighter I, State of Wisconsin.

503-105 Principles of Firefighting **3 cr**

This course introduces the student to the basic skills and techniques used in firefighting. Classroom instruction includes a variety of fire-related topics which are reinforced and enhanced through practical skills

activities. The course content follows the requirements for NFPA 1001 Firefighter I. Upon completion, the student is eligible to test for state fire certification.

Restricted to students admitted to the following program(s): 10-531-2 FireMedic.

503-106 Fire Inspection Services **2 cr**

This course familiarizes the students with state and local statutes and national codes relating to fire prevention. The course requires the completion of actual inspections and pre-plans. In addition, the course has a public education section which requires students to present fire safety for all age groups.

Restricted to students admitted to the following program(s): 10-531-2 FireMedic.

503-107 Fire Dept Apparatus Ops **3 cr**

This course prepares firefighters to drive and operate fire department emergency apparatus. The course presents theories of hydraulics as applied to the fire service, with emphasis on mathematics, and formulas used in operating fire apparatus pumps. Students receive lecture and practical training on maintenance, driving, operating on-board pumps and equipment, and apparatus testing. The course content meets the NFPA 1002 requirement for fire department pumper driver/operator.

Prerequisite(s): 503-105 Principles of Firefighting (or taken concurrently). Restricted to students admitted to the following program(s): 10-531-2 FireMedic.

503-114 Fire Investigation **3 cr**

This course covers the fundamentals of fire investigation practices and procedures. The student will be given an understanding of the role of the modern fire investigator and the techniques used to determine the cause and circumstances of various fire situations, including arson.

Restricted to students admitted to the following program(s): 10-503-2 Fire Protection Technician.

503-130 Fire Internship **2 cr**

This course allows second-year program students to actively participate as a 'working' member of a fire department. Students work the 24-hour shift schedule at one of three local fire departments (excluding class times), and perform the same duties as the firefighters. Evaluation is determined by fire department officials and the course instructor. Prerequisite(s): Successful completion of entrance exams: written, physical ability, physical exam, and interview.

Prerequisite(s): (503-105 Principles of Firefighting and 503-106 Fire Inspection Services and 503-107 Fire Dept Apparatus Ops and 503-141 Special Rescue).

503-141 Special Rescue **3 cr**

This course introduces the various types of special rescues required by many fire/EMS organizations. Classroom presentations and practical evolutions will be conducted on Confined Space and Trench Entry and Rescue, Water Rescue, Vehicle Extrication, and High Angle Rescue.

Restricted to students admitted to the following program(s): 10-531-2 FireMedic.

504-Criminal Justice

504-103 LE Strategies for Employment **3 cr**

This course entails essential steps in preparing and obtaining a position in the field of Law Enforcement. Students will explore the various aspects of each setting from an organizational perspective. Resume, letter of application and portfolio tools will be created. Practical applications for job interviewing will take place along with learning from area employers how to conduct a successful interview. Part of the course will be

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devoted to the preparation and execution of building physical agility. Restricted to students admitted to the following program(s): 10-504-1 Criminal Justice-Law Enforce.

504-105 Criminal Justice Ethics 2 cr

This course will cover areas of ethical decision making in modern Law Enforcement and Corrections. Incorporated into the class will be the State of Wisconsin Training and Standards objectives on ethical decision making that is part of the 520-hour Law Enforcement Recruit program. The course will explore the foundations of ethics in modern law enforcement and methods for ensuring that the new officer begins and remains an ethical officer.

Restricted to students admitted to the following program(s): 10-504-1 Criminal Justice-Law En, 10-504-1 Criminal Justice-Law Enforce.

504-121 Patrol Procedures 4 cr

Patrol officer's role; explanation of handling usual and unusual assignments; strategies of officer survival; patrol tactics; traffic stops.

Prerequisite(s): 504-160 Community Policing or 504-907 Community Policing Strategies. Restricted to students admitted to the following program(s): 10-504-1 Criminal Justice-Law Enforce.

504-132 Crash Investigation I 2 cr

This course focuses on collecting data at crash scenes that range from simple to complex. Emphasis is placed on understanding and locating reference points as well as using baseline and triangulation measuring methods to record evidence. Students will master simple measuring basics and receive training on more complicated scenes by adding components of horizontal and vertical curves. Students will be exposed to a wide range of evidence found at crash scenes and learn proper methods of recording the marks left at the scene. At Scene Photography will also be a component of this class. Considerable time will be spent outside on field projects collecting roadway information which will give participants practice on measuring and diagramming scenes, simple and complex, to make detailed scale diagrams possible of a crash or crime scene.

504-134 Crash Investigation II 2 cr

This course focuses on what information should be collected at a crash scene and the best methods to collect that scene data. Crash investigation (I) exposed the students to the various marks that can be found; this section will identify and explore the significance of the marks. Basic speed estimates will be taught as well as advanced applications of the traffic template. Additionally locating, identifying, and collecting evidence on a vehicle or from pedestrians involved in crashes will be taught. Attendees will learn the importance of vehicle examinations and the meaning of thrust and how it applies to vehicle location and positions on the roadway. Students will learn how to determine and apply time/distance issues to crash situations. Special topics like nighttime problems, motorcycle and pedestrian issues, lamps, tires, and safety equipment inspections will be addressed.

504-162 Contemp. Issues in Crim. Just. 3 cr

An examination of all levels of criminal justice system, public and private, in contemporary issues that impact on these agencies now and in the future. It will investigate futuristic challenges and concerns of these agencies as they relate to legal, social, economic, political and employment opportunities.

504-166 Field Experience-Crim Justice 3 cr

Firsthand observation within a criminal justice agency of the student's choice; learning activities provided on-site with participating agencies. Prerequisite(s): (504-101 Criminal Justice, Intro to or 504-900 Intro to Criminal Justice) and (504-131 Traffic Theory or 504-908 Traffic Theory) and (504-135 Juvenile Law or 504-904 Juvenile Law) and (504-160 Community Policing or 504-907 Community Policing Strategies)

and 504-170 Corrections, Intro to. Restricted to students admitted to the following program(s): 10-504-1 Criminal Justice-Law Enforce.

504-170 Corrections, Intro to 3 cr

State and county correction systems; theories of corrections; historical development; alternatives to incarceration; probation and parole; how the law enforcement and corrections portions of the criminal justice system work together.

504-175 Law Enforcement Cert I 4 cr

Students in this course study guidelines for use of deadly force, the importance of maintaining a good holster and duty belt, load, unload, fire and maintain firearms, follow procedures after firearms combat, objectives of the use of force, arrest process, defensive and arrest tactics, the confrontation continuum, using necessary force, defensive and arrest tactics, and frisking and searching; emphasis will be on tactical and decision shooting exercises/activities. Additional instruction will include the area of emergency first aid based on the Wisconsin Department of Justice objectives. This class is limited to Law Enforcement Certification Track Associate Degree students.

Prerequisite(s): (504-900 Intro to Criminal Justice or 504-101 Criminal Justice, Intro to) and (504-131 Traffic Theory or 504-908 Traffic Theory) and (504-135 Juvenile Law or 504-904 Juvenile Law) and (504-160 Community Policing or 504-907 Community Policing Strategies) and 504-170 Corrections, Intro to. Restricted to students admitted to the following program(s): 10-504-1 Criminal Justice-Law Enforce.

504-176 Law Enforcement-Cert II 4 cr

This course will combine classroom instruction with competency-based lab exercises. Instruction included in this course includes: traffic direction, uniform traffic citation, accident report (MV4000), emergency vehicle operation, high and low risk traffic stops, and roadblocks. Additional instruction will include areas of study not covered in other two-year courses that are required material for the student to achieve certifiability as a law enforcement officer in Wisconsin. This class is limited to Law Enforcement Certification Track Associate Degree students.

Prerequisite(s): 504-175 Law Enforcement Cert I. Restricted to students admitted to the following program(s): 10-504-1 Criminal Justice-Law Enforce.

504-199 Criminal Justice-Ind Study 3 cr

Restricted to students admitted to the following program(s): 10-504-1 Criminal Justice-Law Enforce.

504-322 Interviewing 1 cr

This module is comprised of techniques of interviewing suspects, victims, witnesses, as well as preparing reports and field notes.

Restricted to students admitted to the following program(s): 30-504-1 Crim Jus-Law Enf Academ.

504-325 Traffic Law & Enforcement 1 cr

This is comprised of traffic law and enforcement, vehicle stops, and procedures of officer violator/citizenry contacts.

Restricted to students admitted to the following program(s): 30-504-1 Crim Jus-Law Enf Academ.

504-328 Traffic Accident Investigation 1 cr

This unit is comprised of the officer's role in traffic accident investigation and reporting, alcohol and beverage laws, narcotics laws victim witness assistance and crisis intervention, addressing and dealing with friendly and hostile groups, and disaster and hazardous materials preparation and planning.

Restricted to students admitted to the following program(s): 30-504-1 Crim Jus-Law Enf Academ.

504-329 Juvenile Law 1 cr

This instruction addresses the juvenile code, Wisconsin's mental health

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act, community awareness, and crime prevention.

Restricted to students admitted to the following program(s): 30-504-1 Crim Jus-Law Enf Academ.

504-331 Professional Communications 1 cr

Topics include professional communications, facilitation, and problem solving.

Restricted to students admitted to the following program(s): 30-504-1 Crim Jus-Law Enf Academ.

504-350 Police Academy Scenario Eval 1 cr

A minimum of seven scenarios will be set up for each recruit. Students will be expected to apply all knowledge and skills learned prior to this course. An evaluation will be conducted for each scenario based on desired outcomes.

Restricted to students admitted to the following program(s): 30-504-1 Crim Jus-Law Enf Academ.

504-351 Policing in America 1 cr

Students will learn the rules and procedures of the academy and how the various elements of the criminal justice system relate as well as the importance of professionalism. Exploration of the role of law enforcement officers in a democracy along with topics to include belief system pressures, moral problems, decision-making and consequences of decision will be studied. Resources available in communities to assist law enforcement officers along with issues involved policing in a diverse society will be addressed. This course covers Wisconsin required written law enforcement agency policies and procedures.

Restricted to students admitted to the following program(s): 30-504-1 Crim Jus-Law Enf Academ.

504-352 The Legal Context 2 cr

This covers the structure of the criminal justice system, including criminal procedure. Learn the legal bases for law enforcement action such as arrest, use of force and search and seizure, as well as the limits on law enforcement activity. Students will learn the classifications of crimes and other violations including felonies, misdemeanors, and ordinance violations, and the elements of crimes listed in the criminal code. Laws and procedures that affect juveniles, including those related to taking a juvenile into custody, will be discussed.

Restricted to students admitted to the following program(s): 30-504-1 Crim Jus-Law Enf Academ.

504-353 Tactical Skills 3 cr

Students will learn the basis for and limits to use of force by Wisconsin officers including specific techniques for intervention covered in the Wisconsin system of Defense and Arrest tactics. In addition, students will learn necessary weapons handling skills and how to care for and maintain handguns. Skill development in shooting quickly, accurately, and firing under various conditions will be practiced. The basics of room tactical movement, use of cover and concealment, and application to emergency will be learned. Restricted to students admitted to the following program(s): 30-504-1 Crim Jus-Law Enf Academ.

504-354 Relational Skills 3 cr

Students will develop writing skills for law enforcement reports. They will explore the role of communication in law enforcement, develop and apply specific professional communication skills and strategies in simulated situations. The course will examine principles, guidelines, and techniques for proper law enforcement response to people with possible mental disorders, alcohol or drug problems, and/or developmental disabilities. Legal base requirements and practical guideline for conducting emergency and protective placement of persons will be studied. Presenting effective court testimony will be simulated. Explore evolving police strategies, activities and attitudes that build effective law enforcement and community relationships, as well as problem-oriented policing.

Restricted to students admitted to the following program(s): 30-504-1 Crim Jus-Law Enf Academ.

504-355 Patrol Procedures 4 cr

Students will become familiar with Wisconsin's traffic laws and ordinances, including those related to operator licensing and vehicle registration and equipment. Students will acquire skill to enforce the complete Wisconsin Uniform Traffic Citations and (as needed) to direct and control traffic effectively. Material covered includes steps taken as first-in officer to stabilize a complex scene, investigate traffic accidents, take appropriate enforcement actions, and prepare reports. Individual will execute emergency vehicle operation including basic patrol operation, emergency vehicle response and pursuit driving. Students will study the legal basis for making vehicle contacts, techniques for conducting a threat assessment and procedure to control types of vehicle contact. The process for administering and interpreting the operation vehicle while intoxicated standardized field sobriety test (OMVWI/SFST) will be conducted. In addition, students will acquire skill in performing an initial medical assessment for injury or medical condition, provide treatment. Restricted to students admitted to the following program(s): 30-504-1 Crim Jus-Law Enf Academ.

504-356 Investigations 2 cr

This course provides techniques and procedures necessary to interview or interrogate adult and juvenile witnesses, suspects, and victims. Students will learn how to recognize, process, and preserve physical evidence and how to respond to crime victims. Explore the dynamics of victimization and victim's rights. Students will study the statutory elements of each of the sensitive crimes and the dynamics, impacts, and investigative strategies unique to these crimes.

Restricted to students admitted to the following program(s): 30-504-1 Crim Jus-Law Enf Academ.

504-900 Intro to Criminal Justice 3 cr

History of the criminal justice system; philosophy of law enforcement; civil and criminal law; local, state and federal law enforcement; career opportunities.

504-901 Constitutional Law 3 cr

Arrest with and without warrants; searches with or without warrants; exclusionary rules.

Prerequisite(s): (504-902 Criminal Law or 504-113 Criminal Law).

504-902 Criminal Law 3 cr

Principles for criminal liability; historical development; elements of crimes; criminal defenses.

Restricted to students admitted to the following program(s): 10-504-1 Criminal Justice-Law Enforce.

504-903 Professional Communications 3 cr

This course is the study of aspects of professional communications in modern law enforcement and the application of both interview and interrogation techniques for law enforcement officers. Various approaches will be examined with an emphasis on the process of complete communication as well as interviewing and interrogating both witnesses and suspects. An overview of the legal limitations on interrogations will also be included.

Prerequisite(s): 504-902 Criminal Law or 504-113 Criminal Law.

504-904 Juvenile Law 3 cr

Causes and factors of delinquency; gangs; child abuse; drug abuse; police and juveniles; detention and rehabilitation; court system; intake worker.

Prerequisite(s): 504-113 Criminal Law or 504-902 Criminal Law (or taken concurrently).

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- 504-905 Report Writing** 3 cr
Structure and methods of factual writing; spelling, punctuation, paragraphing, purpose and principles of effective writing; report content. Prerequisite(s): (504-902 Criminal Law (or taken concurrently) or 504-113 Criminal Law) and (801-195 Written Communications and 801-171 Business English).
- 504-906 Criminal Investigation Theory** 3 cr
Preliminary investigation, crime scene control; identify and collect evidence; develop information; court presentation of evidence. Prerequisite(s): 504-113 Criminal Law or 504-902 Criminal Law.
- 504-907 Community Policing Strategies** 3 cr
Concepts of public and community relations; understanding the criminal justice system and citizens; community relations in successful law enforcement; historical development of modern United States law enforcement; understanding modern law enforcement agency as a 'helping' organization.
- 504-908 Traffic Theory** 3 cr
Wisconsin traffic code; traffic control; traffic law enforcement techniques; accident investigation; officer/violator relationship.

508-Dental

- 508-101 Dental Health Safety** 1 cr
Prepares dental auxiliary students to respond proactively to dental emergencies, control infection, prevent disease, adhere to OSHA Standards, and safely manage hazardous materials. Students also take patient vital signs and collect patient medical/dental histories. CPR certification is a prerequisite; students will be required to show proof of certification before beginning the course.
Restricted to students admitted to the following program(s): 10-508-1 Dental Hygienist, 30-508-2 Dental Assistant.
- 508-102 Oral Anatomy, Embry, Histology** 4 cr
Prepares Dental Hygienist students to apply detailed knowledge about oral anatomy to planning, implementation, assessment, and evaluation of patient care. Students identify distinguishing characteristics of normal and abnormal dental, head, and neck anatomy and its relationship to tooth development, eruption, and health.
Prerequisite(s): 806-177 Gen Anatomy & Physiology. Restricted to students admitted to the following program(s): 10-508-1 Dental Hygienist.
- 508-103 Dental Radiography** 2 cr
Prepares dental auxiliary students to operate x-ray units and expose bitewing, periapical, extral oral, and occlusal radiographs. Emphasis is placed on protection against x-ray hazards. Students also process, mount, and evaluate radiographs for diagnostic value. In this course, students demonstrate competency on a manikin. In addition, students expose bitewing radiographs on a peer, role-play patient.
Prerequisite(s): 508-101 Dental Health Safety (or taken concurrently) and 508-102 Oral Anatomy, Embry, Histology (or taken concurrently). Restricted to students admitted to the following program(s): 10-508-1 Dental Hygienist.
- 508-105 Dental Hygiene Process 1** 4 cr
Introduces Dental Hygiene students to the basic technical/clinical skills required of practicing Dental Hygienists including use of basic dental equipment, examination of patients, and procedures within the dental unit. Under the direct supervision of an instructor, students integrate hands-on skills with entry-level critical thinking and problem-solving skills. The course also reinforces the application of Dental Health Safety skills.
Prerequisite(s): 508-101 Dental Health Safety (or taken concurrently) and 508-102 Oral Anatomy, Embry, Histology (or taken concurrently).
- Restricted to students admitted to the following program(s): 10-508-1 Dental Hygienist.
- 508-106 Dental Hygiene Process 2** 4 cr
This clinical course builds on and expands the technical/clinical skills student dental hygienists began developing in Dental Hygiene Process I. Under the direct supervision of an instructor, students apply patient care assessment, planning, implementation, and evaluation skills to provide comprehensive care for calculus case type 1 and 2 patients and perio case type 0, I, and II patients. This course introduces the application of fluoride and desensitizing agents, whole mouth assessments, comprehensive periodontal examinations, application of sealants, and patient classification. Students also begin performing removal of supragingival stain, dental plaque, calcified accretions, and deposits. In addition, they gain further experience in exposing radiographs on patients. The course also reinforces the application of Dental Health Safety skills.
Prerequisite(s): 508-102 Oral Anatomy, Embry, Histology and 508-103 Dental Radiography and 508-105 Dental Hygiene Process 1.
- 508-107 Dental Hygiene Ethics & Profes** 1 cr
Helps student dental hygienists develop and apply high professional and ethical standards. Students apply the laws that govern the practice of dental hygiene to their work with patients, other members of a dental team and the community. Emphasis is placed on maintaining confidentiality and obtaining informed consent. Students enhance their ability to present a professional appearance.
Prerequisite(s): 508-112 Dental Hygiene Process 3. Co-requisite(s): 508-117 Dental Hygiene Process 4. Restricted to students admitted to the following program(s): 10-508-1 Dental Hygienist.
- 508-108 Periodontology** 3 cr
This course prepares student dental hygienists to assess the periodontal health of patients, plan prevention and treatment of periodontal disease, and to evaluate the effectiveness of periodontal treatment plans. Emphasis is placed on the recognition of the signs and causes of periodontal disease and on selection of treatments modalities that minimize risk and restore periodontal health.
Prerequisite(s): 508-102 Oral Anatomy, Embry, Histology and 508-103 Dental Radiography and 806-186 Intro to Biochemistry and 806-197 Microbiology and 508-106 Dental Hygiene Process 2 (or taken concurrently) and 508-111 General & Oral Pathology (or taken concurrently).
- 508-109 Cariology** 1 cr
This course focuses on the characteristics and contributing factors of dental decay. Dental Hygiene students help patients minimize caries risk by developing treatment plans, communicating methods to patients, and evaluating treatment results.
Prerequisite(s): 806-186 Intro to Biochemistry and 806-197 Microbiology and 508-106 Dental Hygiene Process 2 (or taken concurrently).
- 508-110 Nutrition and Dental Health** 2 cr
Prepares student dental hygienists to counsel patients about diet and its impact on oral health. Students learn to distinguish between balanced and unbalanced diets and to construct diets that meet the needs of patients with compromised dental/oral health. Students also learn to counsel patients about the effect of eating disorders on dental health.
Prerequisite(s): 806-186 Intro to Biochemistry (or taken concurrently).
- 508-111 General & Oral Pathology** 3 cr
This course prepares the student dental hygienist to determine when to consult, treat or refer clients with various disease, infection or physiological conditions. Students learn to recognize the signs, causes, and implications of common pathological conditions including inflammatory responses, immune disorders, genetic disorders, developmental disorders of tissues and cysts, oral tissue trauma, and neoplasm of the oral cavity.

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Prerequisite(s): 508-102 Oral Anatomy, Embry, Histology and 508-103 Dental Radiography and 508-106 Dental Hygiene Process 2 (or taken concurrently) and 806-177 Gen Anatomy & Physiology. Restricted to students admitted to the following program(s): 10-508-1 Dental Hygienist.

508-112 Dental Hygiene Process 3 5 cr

This clinical course builds on and expands the technical/clinical skills student dental hygienists developed in Dental Hygiene Process II. In consultation with the instructor, students apply independent problem-solving skills in the course of providing comprehensive care for calculus case type 1, 2, and 3 patients and perio case type 0, I, II, and III patients. This course introduces root detoxification using hand and ultrasonic instruments, manipulation of files, use of oral irrigators, selection of dental implant prophylaxis treatment options, and administration of chemotherapeutic agents. Students also adapt care plans in order to accommodate patients with special needs.

Prerequisite(s): 508-106 Dental Hygiene Process 2 and 508-108 Periodontology and 508-109 Cariology and 508-110 Nutrition and Dental Health and 508-111 General & Oral Pathology.

508-113 Dental Materials 2 cr

Prepares dental auxiliary students to handle and prepare dental materials such as liners, bases, cements, amalgam, resin restorative materials, gypsum products, and impression materials. They also learn to take alginate impressions on manikins and clean removable appliances.

Prerequisite(s): 508-101 Dental Health Safety and 508-102 Oral Anatomy, Embry, Histology (or taken concurrently) and 508-103 Dental Radiography (or taken concurrently).

508-114 Dental Pharmacology 2 cr

Prepares student dental hygienists to select safe and effective patient premedication, local anesthetic, chemo therapeutic, and antimicrobial agents within the scope of dental hygiene practice. Students will also learn to recognize potential pharmacological contraindications for specific patients and to take measures to avoid negative impact or alert other members of the dental team to possible negative impact.

Prerequisite(s): 508-106 Dental Hygiene Process 2 and 806-186 Intro to Biochemistry and 806-197 Microbiology and 508-112 Dental Hygiene Process 3 (or taken concurrently).

508-115 Community Dental Health 2 cr

This course prepares the Dental Hygienist student to play a proactive role in improving the dental health of community members of all ages. Students perform and interpret dental health research to determine community dental health needs. They also participate in the development, implementation, and evaluation of a community dental health program.

Prerequisite(s): 508-112 Dental Hygiene Process 3 (or taken concurrently).

508-116 Dental Pain Management 1 cr

This course prepares the student dental hygienist to work within the scope of dental hygiene practice to manage pain for dental patients. Students learn to prevent and manage common emergencies related to administration of local anesthesia, prepare the armamentarium, and administer local anesthesia. The course also addresses the recommendation of alternative pain control measures.

Prerequisite(s): 508-102 Oral Anatomy, Embry, Histology and 508-112 Dental Hygiene Process 3 and 508-114 Dental Pharmacology.

508-117 Dental Hygiene Process 4 4 cr

This clinical course builds on and expands the technical/clinical skills student dental hygienists developed in Dental Hygiene Process III. With feedback from the instructor, students manage all aspects of cases in the course of providing comprehensive care for calculus case type 0, 1, 2, and 3 patients and for perio case type 0, I, II, and III patients. Empha-

sizes maximization of clinical efficiency and effectiveness. Prepares student dental hygienists to demonstrate their clinical skills in a formal examination situation.

Prerequisite(s): 508-112 Dental Hygiene Process 3 and 508-113 Dental Materials and 508-114 Dental Pharmacology and 508-115 Community Dental Health.

508-118 Health Occupations Career 1 cr

Simulated written and practical exams, individualized study plans, stress/test anxiety management strategies, and dental hygiene license obtainment will be addressed. Strengthen dental hygiene performance on written and clinical practical exams.

Prerequisite(s): 508-112 Dental Hygiene Process 3. Co-requisite(s): 508-117 Dental Hygiene Process 4. Restricted to students admitted to the following program(s): 10-508-1 Dental Hygienist.

508-119 Dental Hyg Natl Board Review 1 cr

This will not be offered on campus but students are given information and encouraged to attend one of the National Board Review courses offered in major cities (our students usually travel to Chicago in January).

508-122 Process V Clin Enrichment 1 cr

The course will focus on patient assessment skills, comprehensive patient treatment, billing and recordkeeping. Students will see a wide variety of patients scheduled throughout the day more closely simulating private practice. Students will be expected to make patient assessments, do treatment plans according to the patient's classification, complete routing/billing forms for the front desk, take both analogue and digital x-rays, place sealants, perform prophylaxis, debridement, root planing and scaling, patient education, smoking cessation, fluoride treatments and dental charting as well as consult with the staff dentist during the exam to coordinate future treatment. Prerequisite: 508-117 Dental Hygiene Process IV or completion of an accredited Dental Hygiene program and current CPR certification, and (Wisconsin State Licensure if returning for refresher course).

508-301 Dental Health Safety 2 cr

Prepares dental auxiliary students to respond proactively to dental emergencies, control infection, prevent disease, adhere to OSHA standards, and safely manage hazardous materials. Students also take patient vital signs and collect patient medical/dental histories. CPR certification is a prerequisite; students will be required to show proof of certification before beginning the course.

Co-requisite(s): 508-302 Dental Chairside and 508-303 Dental Materials and 508-304 Dental & General Anatomy and 508-305 Applied Dental Radiography and 508-306 Dental Assistant Clinical and 508-307 Dental Assistant Professional. Restricted to students admitted to the following program(s): 30-508-2 Dental Assistant.

508-302 Dental Chairside 5 cr

Prepares dental assistant students to chart oral cavity structures, dental pathology, and restorations and to assist a dentist with basic dental procedures including examinations, pain control, amalgam restoration, and cosmetic restoration. Students will also develop the ability to educate patients about preventive dentistry, brushing and flossing techniques, and dental procedures, using lay terminology. Throughout the course, students will apply decoding strategies to the correct use and interpretation of dental terminology.

Prerequisite(s): 508-101 Dental Health Safety (or taken concurrently). Co-requisite(s): 508-303 Dental Materials and 508-304 Dental & General Anatomy and 508-305 Applied Dental Radiography and 508-306 Dental Assistant Clinical and 508-307 Dental Assistant Professional. Restricted to students admitted to the following program(s): 30-508-2 Dental Assistant.

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508-303 Dental Materials

2 cr

Prepares dental auxiliary students to handle and prepare dental materials such as liners, bases, cements, amalgam, resin restorative materials, gypsum products, and impression materials. They also learn to take alginate impressions on manikins and clean removable appliances.

Prerequisite(s): 508-101 Dental Health Safety (or taken concurrently).

Co-requisite(s): 508-302 Dental Chairside and 508-304 Dental & General Anatomy and 508-305 Applied Dental Radiography and 508-306 Dental Assistant Clinical and 508-307 Dental Assistant Professional.

Restricted to students admitted to the following program(s): 30-508-2 Dental Assistant.

508-304 Dental & General Anatomy

2 cr

Prepares dental assistant students to apply fundamentals of general and dental anatomy to informed decision-making and to professional communication with colleagues and patients.

Prerequisite(s): 508-101 Dental Health Safety (or taken concurrently).

Co-requisite(s): 508-302 Dental Chairside and 508-303 Dental Materials and 508-305 Applied Dental Radiography and 508-306 Dental Assistant Clinical and 508-307 Dental Assistant Professional. Restricted to students admitted to the following program(s): 30-508-2 Dental Assistant.

508-305 Applied Dental Radiography

2 cr

Prepares dental auxiliary students to operate x-ray units and expose bitewing, periapical, extral oral, and occlusal radiographs. Emphasis is placed on protection against x-ray hazards. Students also process, mount, and evaluate radiographs for diagnostic value. In this course students demonstrate competency on a manikin. In addition, students expose bitewing radiographs on a peer, role-play patient.

Prerequisite(s): 508-101 Dental Health Safety (or taken concurrently).

Co-requisite(s): 508-302 Dental Chairside and 508-303 Dental Materials and 508-304 Dental & General Anatomy and 508-306 Dental Assistant Clinical and 508-307 Dental Assistant Professional. Restricted to students admitted to the following program(s): 30-508-2 Dental Assistant.

508-306 Dental Assistant Clinical

3 cr

Students apply skills developed in Dental and General Anatomy, Dental Health Safety, Dental Chairside, Dental Materials, Dental Radiography, and Professionalism in a clinical setting with patients. Emphasizes integration of core abilities and basic occupational skills.

Prerequisite(s): 508-101 Dental Health Safety (or taken concurrently).

Co-requisite(s): 508-302 Dental Chairside and 508-303 Dental Materials and 508-304 Dental & General Anatomy and 508-305 Applied Dental Radiography and 508-307 Dental Assistant Professional. Restricted to students admitted to the following program(s): 30-508-2 Dental Assistant.

508-307 Dental Assistant Professional

1 cr

Prepares dental assistant students for professional success in a dental practice or another dental health care environment. Students develop professional appearance and image. More importantly, they learn to work within ethical guidelines and legal frameworks. In preparation for entering the work force, dental assistants customize or develop their portfolios and lay out an ongoing professional development plan.

Prerequisite(s): 508-101 Dental Health Safety (or taken concurrently).

Co-requisite(s): 508-302 Dental Chairside and 508-303 Dental Materials and 508-304 Dental & General Anatomy and 508-305 Applied Dental Radiography and 508-306 Dental Assistant Clinical. Restricted to students admitted to the following program(s): 30-508-2 Dental Assistant.

509-Medical Assistant

509-301 Medical Asst Admin Procedures

2 cr

Introduces medical assistant students to office management, business administration, and the electronic medical record (EMR) in the medical

office. Students learn to schedule appointments, perform filing, record-keeping, telephone and reception duties, communicate effectively with patients and other medical office staff, and keep inventory or supplies.

Prerequisite(s): 103-102 Microsoft Office Suite (or taken concurrently). Restricted to students admitted to the following program(s): 31-509-1 Medical Assistant.

509-302 Human Body in Health & Disease

3 cr

Focuses on diseases that are frequently first diagnosed and treated in the medical office setting. Students learn to recognize human anatomy and the causes, signs, and symptoms of diseases of the major body systems as well as the diagnostic procedures, usual treatment, prognosis and prevention of common diseases.

Prerequisite(s): 501-101 Medical Terminology (or taken concurrently).

Restricted to students admitted to the following program(s): 31-509-1 Medical Assistant.

509-303 Medical Asst Lab Procedures 1

2 cr

Introduces medical assistant students to laboratory procedures commonly performed by medical assistants in a medical office setting. Students perform CLIA waived routine laboratory procedures commonly performed in the ambulatory care setting. Students follow laboratory safety requirements and federal regulations while performing specimen collection and processing microbiology and urinalysis testing.

Co-requisite(s): 509-304 Medical Asst Clin Procedures 1. Restricted to students admitted to the following program(s): 31-509-1 Medical Assistant.

509-304 Medical Asst Clin Procedures 1

4 cr

Introduces medical assistant students to the clinical procedures performed in the medical office setting. Students perform basic examining room skills including screening, vital signs, patient history, minor surgery, and patient preparation for routine and specialty exams in the ambulatory care setting.

Prerequisite(s): 509-302 Human Body in Health & Disease (or taken concurrently) and 501-101 Medical Terminology (or taken concurrently).

Co-requisite(s): 509-303 Medical Asst Lab Procedures 1. Restricted to students admitted to the following program(s): 31-509-1 Medical Assistant.

509-305 Med Asst Lab Procedures 2

2 cr

Prepares students to perform phlebotomy and CLIA waived hematology, chemistry, immunology and laboratory procedures commonly performed by medical assistants in the ambulatory care setting.

Prerequisite(s): 509-303 Medical Asst Lab Procedures 1 and 501-101 Medical Terminology and 509-302 Human Body in Health & Disease and 509-304 Medical Asst Clin Procedures 1. Co-requisite(s): 509-306 Med Asst Clin Procedures 2. Restricted to students admitted to the following program(s): 31-509-1 Medical Assistant.

509-306 Med Asst Clin Procedures 2

3 cr

Prepares medical assistant students to perform patient care skills in the medical office setting. Students perform clinical procedures including administering medications, performing an electrocardiogram, assisting with respiratory testing, educating patients/community, assisting with emergency preparedness in an ambulatory care setting.

Prerequisite(s): 509-303 Medical Asst Lab Procedures 1 and 509-304 Medical Asst Clin Procedures 1 and 501-308 Pharmacology for Allied Health (or taken concurrently) and 501-101 Medical Terminology and 509-302 Human Body in Health & Disease. Co-requisite(s): 509-305 Med Asst Lab Procedures 2. Restricted to students admitted to the following program(s): 31-509-1 Medical Assistant.

509-307 Med Office Insurance & Finance

2 cr

Introduces medical assistant students to health insurance and finance in the medical office. Students perform bookkeeping procedures, apply

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managed care guidelines, and complete insurance claim forms. Students use medical coding and managed care terminology to perform insurance-related duties.

Prerequisite(s): 103-102 Microsoft Office Suite (or taken concurrently) and 501-101 Medical Terminology and 509-302 Human Body in Health & Disease. Restricted to students admitted to the following program(s): 31-509-1 Medical Assistant.

509-309 Medical Law, Ethics & Profess **2 cr**

Prepares students to display professionalism and perform within ethical and legal boundaries in the health care setting. Students maintain confidentiality, examine legal aspects of the medical record, perform quality improvement procedures, examine legal and bioethical issues, and demonstrate awareness of diversity.

Restricted to students admitted to the following program(s): 31-509-1 Medical Assistant.

509-310 Medical Assistant Practicum **3 cr**

Requires medical assistant students to integrate and apply knowledge and skills from all previous medical assistant courses in actual ambulatory health care settings. Learners perform medical assistant administrative, clinical, and laboratory duties under the supervision of trained mentors to effectively transition to the role of a medical assistant. This is a supervised, unpaid, clinical experience.

Prerequisite(s): 103-102 Microsoft Office Suite (or taken concurrently) and 501-101 Medical Terminology (or taken concurrently) and 509-301 Medical Asst Admin Procedures (or taken concurrently) and 509-302 Human Body in Health & Disease (or taken concurrently) and 509-303 Medical Asst Lab Procedures 1 (or taken concurrently) and 509-304 Medical Asst Clin Procedures 1 (or taken concurrently) and 509-305 Med Asst Lab Procedures 2 (or taken concurrently) and 509-306 Med Asst Clin Procedures 2 (or taken concurrently) and 509-307 Med Office Insurance & Finance (or taken concurrently) and 509-309 Medical Law, Ethics & Profess (or taken concurrently) and 501-308 Pharmacology for Allied Health (or taken concurrently) and 801-195 Written Communications (or taken concurrently). Restricted to students admitted to the following program(s): 31-509-1 Medical Assistant.

509-315 Reception Procedures **2 cr**

Introduces students to customer service skills, advanced patient communication skills (including prescription refills and medical abbreviations), and basic insurance concepts related to the receptionist position. Legal and ethical issues related to the medical office are also introduced.

Prerequisite(s): 509-301 Medical Asst Admin Procedures (or taken concurrently) and 509-302 Human Body in Health & Disease (or taken concurrently).

509-316 Medical Admin Tech Externship **3 cr**

During this 162-hour non-paid clinical course, students will become oriented to the daily operations of a department in a clinic and/or hospital setting. The learner will work under the supervision of staff as they begin to apply their knowledge and skills to the workplace. The program instructor will make on-site visits to ensure that the student has a successful experience. Prerequisite(s): 509-315 Reception Procedures and 509-317 Transcribing Orders and 801-351 Applied Communications.

509-317 Transcribing Orders **3 cr**

Introduces students to coordinating administrative activities in a hospital department. The learner will be exposed to transcribing and processing orders that include medications, laboratory tests, and diagnostic tests.

Prerequisite(s): 509-315 Reception Procedures (or taken concurrently).

512-Surgical Tech

512-327 ST: Introduction **4 cr**

Provides the foundational knowledge of disinfection, sterilization,

infection control, and asepsis. Legal and ethical issues encountered in the healthcare environment are explored. Simulated laboratory practice enables the learner to develop beginning technical skills.

Prerequisite(s): (806-177 Gen Anatomy & Physiology or 806-140 Anatomy & Physiology I) and (501-101 Medical Terminology or 530-153 Medical Terminology I). Co-requisite(s): 512-328 ST: Fundamentals 1 and 512-330 ST: Clinical 1. Restricted to students admitted to the following program(s): 31-512-1 Surgical Technologist.

512-328 ST: Fundamentals 1 **4 cr**

Includes the basic clinical skills needed by the Surgical Technologist in the scrub role. Learners develop skills in identifying basic instrumentation, supplies, drains, catheters, dressings, and sponges. Includes practice experience in creating a sterile field, draping, passing instruments and supplies, performing counts, and preparing supplies.

Prerequisite(s): (806-177 Gen Anatomy & Physiology or 806-140 Anatomy & Physiology I) and (501-101 Medical Terminology (or taken concurrently) or 530-153 Medical Terminology I (or taken concurrently)). Co-requisite(s): 512-327 ST: Introduction and 512-330 ST: Clinical 1. Restricted to students admitted to the following program(s): 31-512-1 Surgical Technologist.

512-329 ST: Fundamentals 2 **2 cr**

Builds upon and reinforces the role of the Surgical Technologist as a member of the operating room team. Discusses care of the patient before, during, and after surgery with emphasis on surgical wounds, wound closure materials, and vital signs. Includes lecture and lab experiences.

Prerequisite(s): 512-328 ST: Fundamentals 1 and 512-331B Surgical Procedures B (or taken concurrently) and 512-332 ST: Clinical 2 (or taken concurrently). Co-requisite(s): 512-334 ST: Clinical 3. Restricted to students admitted to the following program(s): 31-512-1 Surgical Technologist.

512-330 ST: Clinical 1 **3 cr**

Apply basic surgical theories, principles, and procedural techniques in the operating room. Students begin to function as team members under the guidance of the instructor and authorized clinical personnel.

Prerequisite(s): 512-327 ST: Introduction (or taken concurrently) and 512-328 ST: Fundamentals 1 (or taken concurrently). Restricted to students admitted to the following program(s): 31-512-1 Surgical Technologist.

512-331 ST: Surgical Procedures **4 cr**

Provides the foundational knowledge of surgical core and specialty procedures. Examines the pathophysiology diagnostic interventions, and surgical interventions for a variety of surgical procedures. Incorporates integration of basic health sciences and technical knowledge to complete a plan of action for a surgical procedure.

Prerequisite(s): 512-329 ST: Fundamentals 2 and 512-330 ST: Clinical 1.

Co-requisite(s): 512-332 ST: Clinical 2 and 512-334 ST: Clinical 3.

512-331A Surgical Procedures A **2 cr**

Provides the foundational knowledge of surgical core and specialty procedures. Examines the pathophysiology diagnostic interventions, and surgical interventions for a variety of surgical procedures. Incorporates integration of basic healthsciences and technical knowledge to complete a plan of action for a surgical procedure.

Co-requisite(s): 512-327 ST: Introduction and 512-328 ST: Fundamentals 1 and 512-330 ST: Clinical 1.31-512-1 Surgical Technologist.

512-331B Surgical Procedures B **2 cr**

Builds upon the knowledge gained in ST: 512-331A by providing further foundational knowledge of surgical core and specialty procedures.

Examines the pathophysiology diagnostic interventions, and surgical interventions for a variety of surgical procedures. Incorporates integration of basic health sciences and technical knowledge to complete a plan

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of action for a surgical procedure.

Prerequisite(s): 512-327 ST: Introduction and 512-328 ST: Fundamentals 1 and 512-331A Surgical Procedures A and 512-332 ST: Clinical 2 (or taken concurrently) and 512-334 ST: Clinical 3 (or taken concurrently) and 512-329 ST: Fundamentals 2 (or taken concurrently).

512-332 ST: Clinical 2 **4 cr**

Further experience in a clinical setting allows the student to continue to improve technical skills while accepting more responsibilities during surgical procedures.

Prerequisite(s): 512-329 ST: Fundamentals 2 (or taken concurrently) and 512-330 ST: Clinical 1. Co-requisite(s): 512-331 ST: Surgical Procedures and 512-334 ST: Clinical 3.

512-334 ST: Clinical 3 **4 cr**

Enhances the student's technical experience and employee skills. Serves as a transition between student and employee. Application of advanced skills for the entry-level surgical technologist in the clinical setting.

Prerequisite(s): 512-331A Surgical Procedures A (or taken concurrently) and 512-332 ST: Clinical 2 (or taken concurrently) and 801-351 Applied Communications (or taken concurrently).

513-Laboratory Assistant

513-110 Basic Lab Skills **1 cr**

This course explores health career options and the principles and procedures of basic tests performed in the clinical laboratory. You will utilize medical terminology and general laboratory equipment. You will follow required safety and infection control procedures and perform simple laboratory tests.

Co-requisite(s): 513-113 QA Lab Math. Restricted to students admitted to the following program(s): 10-513-1 Clinical Laboratory Technician.

513-111 Phlebotomy **2 cr**

This course provides opportunities for learners to perform routine venipuncture, routine capillary puncture, and special collection procedures.

513-113 QA Lab Math **1 cr**

This course focuses on performing the mathematical calculations routinely used in laboratory settings. You will explore the concepts of quality control and quality assurance in the laboratory. You will review regulatory compliance requirements and certification and continuing education programs.

Co-requisite(s): 513-110 Basic Lab Skills.

513-114 Urinalysis **2 cr**

This course prepares you to perform a complete urinalysis which includes physical, chemical, and microscopic analysis. You will explore renal physiology and correlate urinalysis results with clinical conditions. Prerequisite(s): 513-110 Basic Lab Skills and 513-113 QA Lab Math.

513-115 Basic Immunology Concepts **2 cr**

This course provides an overview of the immune system including laboratory testing methods for diagnosis of immune system disorders, viral, and bacterial infections.

Restricted to students admitted to the following program(s): 10-513-1 Clinical Laboratory Technician.

513-120 Basic Hematology **3 cr**

This course covers the theory and principles of blood cell production and function and introduces you to basic practices and procedures in the hematology laboratory.

Prerequisite(s): 513-110 Basic Lab Skills and 513-111 Phlebotomy and 513-113 QA Lab Math and 513-115 Basic Immunology Concepts. Co-requisite(s): 513-121 Coagulation.

513-121 Coagulation **1 cr**

This course introduces the theory and principles of coagulation and

explores mechanisms involved in coagulation disorders. Emphasis is placed upon laboratory techniques used to diagnose disease and monitor treatment.

Prerequisite(s): 513-110 Basic Lab Skills and 513-111 Phlebotomy and 513-113 QA Lab Math and 513-115 Basic Immunology Concepts. Co-requisite(s): 513-120 Basic Hematology.

513-122 Introduction to Blood Bank **2 cr**

This course focuses on basic blood banking concepts and procedures including blood typing and compatibility testing.

Prerequisite(s): 513-110 Basic Lab Skills and 513-113 QA Lab Math and 513-115 Basic Immunology Concepts.

513-123 Advanced Blood Bank **2 cr**

This course consists of advanced blood banking concepts and procedures including work ups for adverse reaction to transfusions and disease states.

Prerequisite(s): 513-122 Introduction to Blood Bank (or taken concurrently).

513-128 Sexually Transmitted Diseases **3 cr**

Cause, detection, transmission, prevention, treatment, complications, and prognosis of sexually transmitted diseases, including syphilis, gonorrhea, non-gonococcal urethritis, herpes, chancroid, and AIDS.

513-130 Advanced Hematology **2 cr**

This course explores mechanisms involved in the development of hematological disorders. Emphasis is placed upon laboratory techniques used to diagnose disorders and monitor treatment.

Prerequisite(s): 513-120 Basic Hematology and 513-121 Coagulation. Co-requisite(s): 513-151 Clinical Experience 1.

513-131 Clinical Chemistry 1 **3 cr**

Introduces clinical chemistry techniques and procedures for routine analysis using photometric, potentiometric, and separation techniques. Topics in this course include pathophysiology and methodologies for carbohydrate, lipids, proteins, renal function, and blood gas analysis.

Prerequisite(s): 513-114 Urinalysis and (806-186 Intro to Biochemistry or 806-101 Biochemistry) and (806-177 Gen Anatomy & Physiology or 806-140 Anatomy & Physiology I).

513-132 Clinical Chemistry 2 **2 cr**

A continuation of Clinical Chemistry Diagnostics, this course includes techniques and procedures for analysis using sophisticated laboratory instrumentation. Topics include pathophysiology and methodologies for hepatic, bone, cardiac markers, tumor markers, endocrine function, fetal function, miscellaneous body fluids, and toxicology.

Co-requisite(s): 513-131 Clinical Chemistry 1.

513-133 Clinical Microbiology **4 cr**

This course presents the clinical importance of infectious diseases with emphasis upon the appropriate collection, handling, and identification of clinically relevant bacteria. Disease states, modes of transmission and methods of prevention and control, including antibiotic susceptibility testing, will also be discussed.

Prerequisite(s): 806-197 Microbiology. Co-requisite(s): 513-140 Advanced Microbiology. Restricted to students admitted to the following program(s): 10-513-1 Clinical Laboratory Technician.

513-140 Advanced Microbiology **2 cr**

This course provides an overview of acid fast organisms, fungi, parasites, and anaerobic bacteria. The organisms, their pathophysiology, epidemiology, the diseases and conditions that they cause, laboratory methods of handling, culturing, and identification will be discussed.

Prerequisite(s): 806-197 Microbiology. Co-requisite(s): 513-133 Clinical Microbiology.

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513-144 Clinical Experience 3

4 cr

This course provides the learner with opportunities to practice the principles and procedures of laboratory medicine in a clinical laboratory setting including the operation of state of the art instrumentation and the use of laboratory information systems to report results. The fourteen competencies will be divided between Clinical Experience 1, Clinical Experience 2, and Clinical Experience 3. Order that competencies will be covered may vary based on staffing at clinical sites.

Co-requisite(s): 513-130 Advanced Hematology and 513-151 Clinical Experience 1 and 513-152 Clinical Experience 2. Restricted to students admitted to the following program(s): 10-513-1 Clinical Laboratory Technician.

513-145 CLT Seminar

3 cr

Issues related to working in a health care setting; certification, professional societies, patient rights, medical/legal issues and ethics. Must be CLT 3rd semester status.

Restricted to students admitted to the following program(s): 10-513-1 Clinical Laboratory Technician.

513-147 Phlebotomy Clinical

1 cr

Practical training in phlebotomy skills at a clinical site. Successful completion of the Phlebotomy course, as well as the consent of the Phlebotomy instructor is required. Also, the student must be a high school graduate (or equivalent) to register for this course. Students must complete a physical exam and a criminal background check before registering. This course is not eligible for financial aid.

Prerequisite(s): 513-111 Phlebotomy.

513-151 Clinical Experience 1

3 cr

This course provides the learner with opportunities to practice the principles and procedures of laboratory medicine in a clinical laboratory setting including the operation of state of the art instrumentation and the use of laboratory information systems to report results. The fourteen competencies will be divided between Clinical Experience 1, Clinical Experience 2, and Clinical Experience 3. Order that competencies will be covered may vary based on staffing at clinical sites.

Prerequisite(s): 513-131 Clinical Chemistry 1 and 513-132 Clinical Chemistry 2 and 513-145 CLT Seminar. Co-requisite(s): 513-130 Advanced Hematology and 513-144 Clinical Experience 3 and 513-152 Clinical Experience 2. Restricted to students admitted to the following program(s): 10-513-1 Clinical Laboratory Technician.

513-152 Clinical Experience 2

4 cr

This course provides the learner with opportunities to practice the principles and procedures of laboratory medicine in a clinical laboratory setting including the operation of state of the art instrumentation and the use of laboratory information systems to report results. The fourteen competencies will be divided between Clinical Experience 1, Clinical Experience 2, and Clinical Experience 3. Order that competencies will be covered may vary based on staffing at clinical sites.

Prerequisite(s): 513-131 Clinical Chemistry 1 and 513-132 Clinical Chemistry 2 and 513-145 CLT Seminar. Co-requisite(s): 513-130 Advanced Hematology and 513-144 Clinical Experience 3 and 513-151 Clinical Experience 1. Restricted to students admitted to the following program(s): 10-513-1 Clinical Laboratory Technician.

515-Respiratory Care Practitioner

515-111 Respiratory Survey

3 cr

This course will introduce the student to issues facing health care workers. Topics will include ethics, confidentiality, and professionalism. Health care structure and economics will also be introduced. Other topics may include professional licensure, legal aspects of health care, and patient communication.

Restricted to students admitted to the following program(s): 10-515-1 Respiratory Therapist.

515-112 Respiratory Airway Management

2 cr

Provides a comprehensive exploration of airway management concepts and skills.

Prerequisite(s): 515-172 Respiratory Therapeutics 2 and 515-174 Respiratory/Cardiac Physiology (or taken concurrently) and 515-175 Respiratory Clinical 1 and 806-197 Microbiology. Restricted to students admitted to the following program(s): 10-515-1 Respiratory Therapist.

515-113 Respiratory Life Support

3 cr

Focuses on management of adult ventilatory support.

Prerequisite(s): 515-172 Respiratory Therapeutics 2 and 515-175 Respiratory Clinical 1 and 515-112 Respiratory Airway Management (or taken concurrently). Restricted to students admitted to the following program(s): 10-515-1 Respiratory Therapist.

515-142 Respiratory Lab Skills 2

3 cr

Respiratory critical care procedures will be the focus of this course.

Adult and neonatal/pediatric mechanical ventilation and critical care monitoring will be addressed. Clinical experiences in Respiratory Care Practicum 3 and 4 will complement the course work.

Prerequisite(s): 515-141 Respiratory Lab Skills 1. Co-requisite(s): 515-124 Respiratory Care 4 and 515-125 Respiratory Care 5 and 515-133 Respiratory Care Practicum 3 and 515-134 Respiratory Care Practicum 4.

515-145 Adv Respiratory Care Topics

2 cr

A course to consider advanced topics and perform examination review for the RC students.

Prerequisite(s): 515-177 Respiratory Life Support Techn and 515-178 Respiratory Clinical 2 and 515-179 Respiratory Clinical 3. Restricted to students admitted to the following program(s): 10-515-1 Respiratory Therapist.

515-170 Respiratory Therapy Survey

4 cr

Examines the role of the Respiratory Therapist within the healthcare community. Reviews the ethical, legal, and regulatory principles that guide practice across diverse populations. Introductory patient assessment and critical thinking processes used in the development of respiratory care plans are explored.

Restricted to students admitted to the following program(s): 10-515-1 Respiratory Therapist.

515-171 Respiratory Therapeutics 1

3 cr

Introduces the topics of medical gas administration and humidity and aerosol therapy. The learner will apply physics, math, and patient assessment concepts to oxygen, aerosol and humidity therapy.

Prerequisite(s): 515-111 Respiratory Survey (or taken concurrently) or 515-170 Respiratory Therapy Survey (or taken concurrently) and 806-177 Gen Anatomy & Physiology (or taken concurrently). Restricted to students admitted to the following program(s): 10-515-1 Respiratory Therapist.

515-172 Respiratory Therapeutics 2

3 cr

Introduces therapeutic procedures including arterial puncture, bronchial hygiene, lung expansion therapy, and pulmonary rehabilitation.

Prerequisite(s): 515-171 Respiratory Therapeutics 1 (or taken concurrently).

515-173 Respiratory Pharmacology

3 cr

Examines basic pharmacology principles, drug dosage, and calculations. Medications for inhalation including mucolytics, bronchodilators, and anti-inflammatories. Also includes cardiac drugs, anesthetic drugs, neuromuscular blockers, and antimicrobials.

Prerequisite(s): 806-177 Gen Anatomy & Physiology and (515-170 Respiratory Therapy Survey or 515-111 Respiratory Survey).

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515-174 Respiratory/Cardiac Physiology 3 cr
Provides the student with an in-depth knowledge of the structure and function of the respiratory and circulatory systems necessary to function as a competent Respiratory Therapist.

Prerequisite(s): 806-177 Gen Anatomy & Physiology. Restricted to students admitted to the following program(s): 10-515-1 Respiratory Therapist.

515-175 Respiratory Clinical 1 2 cr
Introduces Respiratory Therapy practice in the hospital setting. Includes the development of skills such as basic therapeutics, patient assessment, medical record review, safety practices, patient interaction, and communication.

Prerequisite(s): 515-170 Respiratory Therapy Survey and 501-101 Medical Terminology (or taken concurrently) and 515-171 Respiratory Therapeutics 1 (or taken concurrently) and 515-172 Respiratory Therapeutics 2 (or taken concurrently) and 515-176 Respiratory Disease and 515-173 Respiratory Pharmacology and 515-174 Respiratory/Cardiac Physiology (or taken concurrently).10-515-1 Respiratory Therapist.

515-176 Respiratory Disease 3 cr
Exploration of signs, symptoms, causes, progression, and treatment of obstructive, restrictive and infectious diseases or disorders of the body that affect the respiratory system.

Prerequisite(s): 806-177 Gen Anatomy & Physiology and (515-111 Respiratory Survey or 515-170 Respiratory Therapy Survey).

515-177 Respiratory Life Support Techn 4 cr
Focuses on adult respiratory critical care including management of mechanical ventilation and artificial airways.

Prerequisite(s): 515-172 Respiratory Therapeutics 2 and 515-174 Respiratory/Cardiac Physiology and 515-175 Respiratory Clinical 1.

515-178 Respiratory Clinical 2 3 cr
Continued development of Respiratory Therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing and interpreting data to make appropriate modifications in patient care. This course includes the complete program competency list. At the completion of this clinical, learners must demonstrate competence in a minimum of 12 (required and/or simulated) competencies. The instructor may identify specific competencies to be addressed during this clinical.

Prerequisite(s): 515-175 Respiratory Clinical 1 and 806-197 Microbiology. 10-515-1 Respiratory Therapist.

515-179 Respiratory Clinical 3 3 cr
Continued development of Respiratory Therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing and interpreting data to make appropriate modifications in patient care. This course includes the complete program competency list. At the completion of this clinical, learners must demonstrate competence in a minimum of 19 (required and/or simulated) competencies. The instructor may identify specific competencies to be addressed during this clinical.

Prerequisite(s): 515-178 Respiratory Clinical 2 (or taken concurrently).10-515-1 Respiratory Therapist.

515-180 Respiratory Neo/Peds Care 2 cr
Provides a comprehensive orientation to the field of neonatal and pediatric respiratory care to include fetal development, birth, neonatal physiology, pulmonary dynamics, abnormal cardiopulmonary conditions, diseases, noninvasive and invasive therapeutic interventions.

Prerequisite(s): 515-177 Respiratory Life Support Techn (or taken concurrently). Co-requisite(s): 515-112 Respiratory Airway Management and 515-113 Respiratory Life Support.10-515-1 Respiratory Therapist.

515-181 Resp & Circ Diagnostics & Moni 3 cr
Advanced invasive and noninvasive diagnostic cardiopulmonary procedures including pulmonary function, hemodynamics and rescue medicine.

Prerequisite(s): 515-173 Respiratory Pharmacology and 515-176 Respiratory Disease (or taken concurrently) and 515-177 Respiratory Life Support Techn (or taken concurrently).

515-182 Respiratory Therapy Clin Prac 4 3 cr
Continued development of Respiratory Therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing, and interpreting data to make appropriate modifications in patient care. This course includes the complete program competency list. At the completion of this clinical, learners must demonstrate competence in a minimum of 26 (required and/or simulated) competencies. The instructor may identify specific competencies to be addressed during this clinical.

Prerequisite(s): 515-179 Respiratory Clinical 3 and 515-177 Respiratory Life Support Techn (or taken concurrently).

515-183 Respiratory Therapy Clin Prac 5 3 cr
Focuses on the completion of respiratory therapy competencies and transition to employment. This course includes the complete program competency list. At the completion of this clinical, learners must demonstrate competence in all of the required and required/simulated competencies. The instructor may identify specific competencies to be addressed during this clinical.

Prerequisite(s): 515-182 Respiratory Therapy Clin Prac4 (or taken concurrently).

517-Renal Dialysis

517-302 Renal Failure & Support Ther 3 cr
This course explores the pathological changes and/or conditions of the renal system and the effects of these changes on the dialysis patient.

Prerequisite(s): 517-321 Principles of Renal Dialysis I. Co-requisite(s): 517-304 Hemodialysis Lab Procedures and 517-322 Principles of Renal Dialysis 2 and 517-323 Clinical Practicum 1 and 517-324 Clinical Practicum 2.

517-304 Hemodialysis Lab Procedures 1 cr
This laboratory course provides the student with hands-on experience in learning the technical skills required to function as a Renal Dialysis Technician.

Prerequisite(s): 517-321 Principles of Renal Dialysis I. Co-requisite(s): 517-302 Renal Failure & Support Ther and 517-322 Principles of Renal Dialysis 2 and 517-323 Clinical Practicum 1 and 517-324 Clinical Practicum 2.

517-320 Intro to Renal Dialysis 3 cr
This course introduces the student to health care concepts, basic patient care skills, infection control procedures, chronic illness and the grieving process, stress management, and related interpersonal skills.

Prerequisite(s): 501-101 Medical Terminology (or taken concurrently) and (801-196 Oral/Interpersonal Comm (or taken concurrently) or 801-351 Applied Communications (or taken concurrently)) and (809-198 Intro to Psychology (or taken concurrently) or 809-199 Psychology of Human Relations (or taken concurrently). Co-requisite(s): 517-321 Principles of Renal Dialysis I. Restricted to students admitted to the following program(s): 31-517-1 Renal Dialysis Technician.

517-321 Principles of Renal Dialysis I 4 cr
This course introduces the student to normal renal anatomy and physiology, renal failure, dialysis, vascular access, and basic laboratory concepts.

Prerequisite(s): 517-320 Intro to Renal Dialysis (or taken concurrently). Restricted to students admitted to the following program(s): 31-517-1 Renal Dialysis Technician.

517-322 Principles of Renal Dialysis 2 3 cr
This course provides the student with in-depth applications of the prin-

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cedures and procedures of hemodialysis.

Prerequisite(s): 517-321 Principles of Renal Dialysis I. Co-requisite(s): 517-302 Renal Failure & Support Ther and 517-304 Hemodialysis Lab Procedures and 517-323 Clinical Practicum 1 and 517-324 Clinical Practicum 2.

517-323 Clinical Practicum 1 **2 cr**

This course focuses on development and improvement of skills in assigned dialysis facilities.

Prerequisite(s): 517-321 Principles of Renal Dialysis I. Co-requisite(s): 517-302 Renal Failure & Support Ther and 517-304 Hemodialysis Lab Procedures and 517-322 Principles of Renal Dialysis 2 and 517-324 Clinical Practicum 2.

517-324 Clinical Practicum 2 **3 cr**

This course focuses on development and improvement of skills in assigned dialysis facilities.

Prerequisite(s): 517-323 Clinical Practicum 1 (or taken concurrently).

524-Physical Therapy Assistant

524-138 PTA Kinesiology 1 **3 cr**

Introduces basic principles of musculoskeletal anatomy, kinematics, and clinical assessment. Students locate and identify muscles, joints, and other landmarks of the lower quadrant in addition to assessing range of motion and strength.

Prerequisite(s): 806-177 Gen Anatomy & Physiology (or taken concurrently). Co-requisite(s): 524-139 PTA Patient Interventions and 524-140 PTA Professional Issues 1. Restricted to students admitted to the following program(s): 10-524-1 Physical Therapist Assistant.

524-139 PTA Patient Interventions **4 cr**

An introduction to basic skills and physical therapy interventions performed by the physical therapist assistant.

Co-requisite(s): 524-138 PTA Kinesiology 1 and 524-140 PTA Professional Issues 1. Restricted to students admitted to the following program(s): 10-524-1 Physical Therapist Assistant.

524-140 PTA Professional Issues 1 **2 cr**

Introduces the history and development of the physical therapy program, legal and ethical issues, the interdisciplinary health care team, and professional communication skills.

Co-requisite(s): 524-138 PTA Kinesiology 1 and 524-139 PTA Patient Interventions. Restricted to students admitted to the following program(s): 10-524-1 Physical Therapist Assistant.

524-141 PTA Kinesiology 2 **4 cr**

Applies basic principles from PTA Kinesiology 1 to the axial skeleton and upper quadrant including location and identification of muscles, joints and other landmarks. Assess range of motion and strength of the axial skeleton and upper quadrant. Integrate analysis of posture and gait.

Prerequisite(s): 524-138 PTA Kinesiology 1 and 524-139 PTA Patient Interventions and 524-140 PTA Professional Issues 1 and 806-177 Gen Anatomy & Physiology. Co-requisite(s): 524-142 PTA Therapeutic Exercise and 524-143 PTA Therapeutic Modalities.

524-142 PTA Therapeutic Exercise **3 cr**

Provides instruction on the implementation of a variety of therapeutic exercise principles. Learners implement, educate, adapt, and assess responses to therapeutic exercises.

Prerequisite(s): 524-138 PTA Kinesiology 1 (or taken concurrently). Co-requisite(s): 524-141 PTA Kinesiology 2 and 524-143 PTA Therapeutic Modalities.

524-143 PTA Therapeutic Modalities **4 cr**

Develops the knowledge and technical skills necessary to perform nu-

merous therapeutic modalities likely to be utilized as a PTA.

Co-requisite(s): 524-141 PTA Kinesiology 2 and 524-142 PTA Therapeutic Exercise.

524-144 PTA Princ of Neuro Rehab **4 cr**

Integrates concepts of neuromuscular pathologies, physical therapy interventions, and data collection in patient treatment.

Prerequisite(s): 524-141 PTA Kinesiology 2 and 524-142 PTA Therapeutic Exercise and 524-143 PTA Therapeutic Modalities. Co-requisite(s): 524-145 PTA Princ of Musculo Rehab and 524-146 PTA Cardio & Integ Mgmt and 524-147 PTA Clinical Practice 1.

524-145 PTA Princ of Musculo Rehab **4 cr**

Integrates concepts of musculoskeletal pathologies, physical therapy interventions, and data collection in patient treatment.

Prerequisite(s): 524-139 PTA Patient Interventions and 524-141 PTA Kinesiology 2 and 524-142 PTA Therapeutic Exercise. Co-requisite(s): 524-144 PTA Princ of Neuro Rehab and 524-146 PTA Cardio & Integ Mgmt and 524-147 PTA Clinical Practice 1.

524-146 PTA Cardio & Integ Mgmt **3 cr**

Integrates concepts of cardiopulmonary and integumentary pathologies, physical therapy interventions, and data collection in patient treatment.

Prerequisite(s): 524-139 PTA Patient Interventions and 524-141 PTA Kinesiology 2 and 524-142 PTA Therapeutic Exercise. Co-requisite(s): 524-144 PTA Princ of Neuro Rehab and 524-145 PTA Princ of Musculo Rehab and 524-147 PTA Clinical Practice 1.

524-147 PTA Clinical Practice 1 **2 cr**

Provides a part-time clinical experience to apply foundational elements, knowledge, and technical skills pertinent to physical therapy practice.

Prerequisite(s): 524-141 PTA Kinesiology 2 and 524-142 PTA Therapeutic Exercise. Co-requisite(s): 524-144 PTA Princ of Neuro Rehab and 524-145 PTA Princ of Musculo Rehab and 524-146 PTA Cardio & Integ Mgmt.

524-148 PTA Clinical Practice 2 **3 cr**

Provides another part-time clinical experience to apply foundational elements, knowledge, and technical skills required of the entry-level physical therapist assistant in various practice settings.

Prerequisite(s): 524-147 PTA Clinical Practice 1. Co-requisite(s): 524-149 PTA Rehab Across the Lifespan and 524-150 PTA Professional Issues 2 and 524-151 PTA Clinical Practice 3.

524-149 PTA Rehab Across the Lifespan **2 cr**

A capstone course that integrates concepts of pathology, physical therapy interventions and data collection across the lifespan. In addition, the PTA's role in health, wellness and prevention, reintegration, and physical therapy interventions for special patient populations will be addressed.

Prerequisite(s): 524-147 PTA Clinical Practice 1. Co-requisite(s): 524-148 PTA Clinical Practice 2 and 524-150 PTA Professional Issues 2 and 524-151 PTA Clinical Practice 3.

524-150 PTA Professional Issues 2 **2 cr**

Incorporates professional development, advanced legal and ethical issues, healthcare management and administration, and further development of professional communication strategies.

Prerequisite(s): 524-147 PTA Clinical Practice 1. Co-requisite(s): 524-148 PTA Clinical Practice 2 and 524-149 PTA Rehab Across the Lifespan and 524-151 PTA Clinical Practice 3.

524-151 PTA Clinical Practice 3 **5 cr**

Provides a full-time clinical experience to apply foundational elements, knowledge, and technical skills required of the entry-level physical therapist assistant in various practice settings.

Prerequisite(s): 524-147 PTA Clinical Practice 1. Co-requisite(s): 524-148 PTA Clinical Practice 2 and 524-149 PTA Rehab Across the Lifespan and 524-150 PTA Professional Issues 2.

Course Descriptions

526-Radiologic Technology

526-149 Radiographic Procedures 1 5 cr

Prepares radiography students to perform routine radiologic procedures on various parts of the body including the upper body, hip, pelvis, and ankle. Students apply knowledge of human anatomy to position the patient correctly to achieve the desired result.

Prerequisite(s): 806-177 Gen Anatomy & Physiology (or taken concurrently). Restricted to students admitted to the following program(s): 10-526-1 Radiography.

526-158 Introduction to Radiography 3 cr

Introduces students to the role of radiography in health care. Students apply medical terminology, legal and ethical considerations to patient care and pharmacology in the radiologic sciences.

Restricted to students admitted to the following program(s): 10-526-1 Radiography.

526-159 Radiographic Imaging 1 3 cr

Introduces radiography students to the process and components of analog imaging. Students determine the factors that affect image quality including contrast, density, detail, and distortion.

Restricted to students admitted to the following program(s): 10-526-1 Radiography.

526-160 DMS-Professional Preparation 1 cr

This course is only for students progressing through the program to prepare for the internship experience. Competencies for abdominal, gynecological, obstetrical, vascular, and small part imaging will be updated. The course will emphasize board preparation offering assistance with study skills and will offer a mock registry.

Prerequisite(s): 526-207 Abdominal Sonography and 526-208 OB/GYN Sonography 1.

526-164 Evaluating Medical Images 1 cr

Classroom instruction includes presentation, discussion, and critique of medical images relative to Sonography. Course will focus on image quality, normal anatomy, unusual anatomy, and pathology as imaged on ultrasound exams. Course also examines abnormal findings on other imaging modalities which may require a targeted ultrasound.

Restricted to students admitted to the following program(s): 10-526-2 Diagnostic Medical Sonography.

526-168 Radiography Clinical 1 2 cr

This beginning level clinical course prepares radiography students to perform radiologic procedures on patients with extensive supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. An emphasis of the course is the development of communication and critical thinking skills appropriate to the clinical setting.

Prerequisite(s): 806-177 Gen Anatomy & Physiology (or taken concurrently). Co-requisite(s): 526-149 Radiographic Procedures 1 and 526-158 Introduction to Radiography and 526-159 Radiographic Imaging 1.

Restricted to students admitted to the following program(s): 10-526-1 Radiography.

526-170 Radiographic Imaging 2 3 cr

Prepares radiography students to apply advanced radiographic principles to the production of radiographic images. Students analyze exposure factor considerations, differentiate between film and exposure latitude, and use beam-restricting devices.

Prerequisite(s): 526-159 Radiographic Imaging 1. Restricted to students admitted to the following program(s): 10-526-1 Radiography.

526-174 ARRT Certification Seminar 2 cr

Provides preparation for the for the national certification exam prepared by the American Registry of Radiologic Technologists. Emphasis is

placed on the weak areas of the individual students. Simulated registry examinations are utilized.

Restricted to students admitted to the following program(s): 10-526-1 Radiography.

526-175 Radiography Independent Study 1 cr

This course is used for re-entry students who need a review of basic concepts prior to re-entry date or as an enhancement to core courses. The Program Director works with the student to develop course competencies and objectives.

Restricted to students admitted to the following program(s): 10-526-1 Radiography.

526-180 DMS-Independent Study 3 cr

Review of scanning, examination protocols, proper selection and settings of standard variables, quality control/assurance, biological effects, and safety competencies. Obstetrical exams and fetal scanning competency is also reviewed. Prerequisite(s): 526-132 Gynecology.

526-189 Radiographic Pathology 1 cr

Prepares radiography students to determine the basic radiographic manifestations of pathological conditions. Students classify trauma related to site, complications, and prognosis and locate the radiographic appearance of pathologies.

Prerequisite(s): 526-191 Radiographic Procedures 2. Restricted to students admitted to the following program(s): 10-526-1 Radiography.

526-190 Radiography Clinical 5 2 cr

This clinical course prepares radiography students to perform radiologic procedures on patients with some supervision. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. Students are encouraged to demonstrate independent judgment in the performance of clinical competencies.

Prerequisite(s): 526-199 Radiography Clinical 4. Restricted to students admitted to the following program(s): 10-526-1 Radiography.

526-191 Radiographic Procedures 2 5 cr

Prepares radiography students to perform routine radiologic procedures on various parts of the body including the skull and spine. Students apply knowledge of human anatomy to position the patient correctly to achieve the desired result.

Prerequisite(s): 526-149 Radiographic Procedures 1 and 806-177 Gen Anatomy & Physiology. Restricted to students admitted to the following program(s): 10-526-1 Radiography.

526-192 Radiography Clinical 2 3 cr

This second level clinical course prepares radiography students to perform radiologic procedures on patients with extensive supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. An emphasis of the course is the development of communication and critical thinking skills appropriate to the clinical setting.

Prerequisite(s): 526-168 Radiography Clinical 1. Co-requisite(s): 526-170 Radiographic Imaging 2 and 526-191 Radiographic Procedures 2. Restricted to students admitted to the following program(s): 10-526-1 Radiography.

526-193 Radiography Clinical 3 3 cr

This third level clinical course prepares radiography students to perform radiologic procedures on patients with supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. An emphasis of the course is the demonstration of communication and critical thinking skills appropriate to the clinical setting. Prerequisite(s): 526-192 Radiography Clinical 2.

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- 526-194 Imaging Equipment Operation** **3 cr**
Introduces radiography students to the principles and application of x-ray technology. Students analyze how x-rays are produced and determine the corrective actions necessary for common equipment malfunctions.
Prerequisite(s): 526-158 Introduction to Radiography and 526-159 Radiographic Imaging 1 (or taken concurrently). Restricted to students admitted to the following program(s): 10-526-1 Radiography.
- 526-195 Radiographic Quality Analysis** **2 cr**
Prepares radiography students to analyze radiographic images for quality. Students apply quality control tests to determine the causes of image problems including equipment malfunctions and procedural errors.
Prerequisite(s): 526-170 Radiographic Imaging 2 and 526-191 Radiographic Procedures 2. Co-requisite(s): 526-189 Radiographic Pathology. Restricted to students admitted to the following program(s): 10-526-1 Radiography.
- 526-196 Modalities** **3 cr**
Introduces radiography students to other types of imaging including ultrasound, MRI, mammography, and bone density scans. Students analyze the role of various imaging technologies in health care.
Restricted to students admitted to the following program(s): 10-526-1 Radiography.
- 526-197 Radiation Protection & Biology** **3 cr**
Prepares radiography students to protect themselves and others from exposure to radioactivity. Students examine the characteristics of radiation and how radiation affects cell biology. Students apply standards and guidelines for radiation exposure.
Prerequisite(s): 526-158 Introduction to Radiography and 526-194 Imaging Equipment Operation and 526-170 Radiographic Imaging 2 (or taken concurrently). Restricted to students admitted to the following program(s): 10-526-1 Radiography.
- 526-198 Radiography Clinical Practice 6** **2 cr**
This final clinical course requires students to integrate and apply all knowledge learned in previous courses to the production of high quality radiographs in the clinical setting. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. Students are encouraged to demonstrate independent judgment in the performance of clinical competencies.
Prerequisite(s): 526-190 Radiography Clinical 5.
- 526-199 Radiography Clinical 4** **3 cr**
This fourth level clinical course prepares radiography students to perform radiologic procedures on patients with supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. Students are encouraged to demonstrate independent judgment in the performance of clinical competencies.
Prerequisite(s): 526-193 Radiography Clinical 3.
- 526-200 Introduction to DMS** **3 cr**
This course introduces learners to the field of Diagnostic Medical Sonography. Explores the duties and functions of the Diagnostic Medical Sonographer as well as the historical background. Learners examine the other imaging modalities as they relate to Sonography. Includes principles of patient care and legal and ethical issues related to Sonography. Restricted to students admitted to the following program(s): 10-526-2 Diagnostic Medical Sonography.
- 526-203 Scanning With Proficiency** **1 cr**
Prepares learners for the rigors of clinical imaging by performing timed abdominal and gynecological competencies.
Co-requisite(s): 526-212 OB/GYN Sonography 2. Restricted to students admitted to the following program(s): 10-526-2 Diagnostic Medical Sonography.
- 526-207 Abdominal Sonography** **4 cr**
Prepares learners to perform ultrasounds of the abdominal organs including liver, gallbladder, biliary tree, pancreas, spleen, urinary tract, aorta and retroperitoneum. Emphasis is placed on recognizing the anatomy and pathology of the abdominal organs. Practice scan sessions included.
Prerequisite(s): (501-101 Medical Terminology or 530-153 Medical Terminology I) and (526-204 DMS, Intro to or 526-105 Intro to Diagnostic Modalities) and 526-205 Patient Care & Ethics and (806-177 Gen Anatomy & Physiology or 806-140 Anatomy & Physiology I) and (806-179 Adv Anatomy & Physiology (or taken concurrently) or 806-141 Anatomy & Physiology II (or taken concurrently)) and 526-206 Sonography Physics & Instrumen (or taken concurrently).
- 526-208 OB/GYN Sonography 1** **3 cr**
Prepares learners to perform ultrasounds of the nonpregnant uterus and the first trimester pregnancy. Explores the anatomy, physiology, and pathology of the female reproductive system as well as intrauterine and ectopic pregnancies.
Prerequisite(s): (501-101 Medical Terminology or 530-153 Medical Terminology I) and (526-204 DMS, Intro to or 526-105 Intro to Diagnostic Modalities) and 526-205 Patient Care & Ethics and 526-206 Sonography Physics & Instrumen (or taken concurrently) and (806-177 Gen Anatomy & Physiology or 806-140 Anatomy & Physiology I) and (806-179 Adv Anatomy & Physiology (or taken concurrently) or 806-141 Anatomy & Physiology II (or taken concurrently)).
- 526-209 DMS Clinical Experience 1** **2 cr**
Clinical 1 is a blended course. During this 8 week experience the learner will have a hands-on, interactive learning experience conducted at an approved JRC-DMS clinical site/sites (if two sites are required to offer fair opportunity). Additional course work including assignments, research, case study work up, quizzes/exams, and discussions will be required on BlackBoard. The course is designed to help prepare the student sonographer for entry level employment in the work force. Areas of concentration include sonography of the liver, gallbladder/biliary tract, pancreas, kidneys, spleen, retroperitoneum and non-pregnant pelvic sonography both transabdominally and endovaginally. The student will apply his/her knowledge and experience in a working clinical environment. Sonographic technique, image acquisition, clinical correlation, and patient care skills are practiced under direct guidance of a registered staff sonographer. The student will become familiar with the organizational process and policies of the department. Students should strive to obtain competency in the areas of abdominal and pelvic scanning.
Prerequisite(s): 526-212 OB/GYN Sonography 2. Co-requisite(s): 526-226 DMS Clinical Experience 2. Restricted to students admitted to the following program(s): 10-526-2 Diagnostic Medical Sonography.
- 526-210 Cross Sectional Anatomy** **2 cr**
Introduces cross sectional anatomy as related to Diagnostic Medical Sonography. Includes correlating images from other imaging modalities.
Prerequisite(s): 526-207 Abdominal Sonography and 526-208 OB/GYN Sonography 1. Restricted to students admitted to the following program(s): 10-526-2 Diagnostic Medical Sonography.
- 526-211 Superficial Sonography** **2 cr**
Investigates superficial structure imaging. Includes anatomy, pathophysiology, and sonographic evaluation. Prepares learner to perform ultrasounds of the thyroid, breast, male reproductive system, musculoskeletal system, and GI tract.
Prerequisite(s): 526-206 Sonography Physics & Instrumen and 526-207 Abdominal Sonography and 526-208 OB/GYN Sonography 1 and 526-210 Cross Sectional Anatomy (or taken concurrently).

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- 526-212 OB/GYN Sonography 2** **3 cr**
Prepares learners to perform ultrasounds of the second and third trimester pregnancy. Explores the anatomy, physiology, and pathology of the female pelvis and the developing fetus. Learners will be exposed to interventional procedures related to pregnancy.
Prerequisite(s): 526-208 OB/GYN Sonography 1. Co-requisite(s): 526-203 Scanning With Proficiency and 526-222 Sonography Physics 2.
- 526-213 DMS Clinical Experience 2** **4 cr**
This clinical course is a blended course. During this 8 week experience the learner will have a hands-on, interactive learning experience conducted at an approved JRC-DMS clinical site/sites (if two sites are required to offer fair opportunity). Additional course work including assignments, research, case study work up, quizzes/exams, and discussions will be required on BlackBoard. The course is designed to help prepare the student sonographer for entry level employment in the work force. The learner will concentrate efforts on scanning first, second, and third trimester obstetrics as well as vascular and superficial structures imaging. Clinical 2 will provide further opportunity to mature and expand the skills previously acquired in a clinical setting. Students begin to function as team members under the guidance of the instructor and authorized clinical personnel.
Prerequisite(s): 526-209 DMS Clinical Experience 1 (or taken concurrently).
- 526-214 Cardiac & Vascular, Intro to** **3 cr**
Introduces the uses of cardiac and vascular sonography. Explores the differences from the general concentration of ultrasound. Learners outline the components of cardiac and vascular exams and learn to correlate results with other diagnostic procedures.
Prerequisite(s): 526-207 Abdominal Sonography and 526-208 OB/GYN Sonography 1. Restricted to students admitted to the following program(s): 10-526-2 Diagnostic Medical Sonography.
- 526-215 DMS Clinical Experience 3** **4 cr**
This course is the final clinical course of the program. It is an 11 week blended course. The learner will have a hands-on, interactive learning experience conducted at an approved JRC-DMS clinical site/sites (if two sites are required to offer fair opportunity). Additional course work including assignments, research, case study work up, quizzes/exams, and discussions will be required on BlackBoard. The course is designed to help prepare the student sonographer for entry level employment in the work force. All imaging skills will be at entry level employment by the end of this experience. The student learner will be capable of independently obtaining diagnostic quality exams in a time efficient manner for all structures previously practiced. Clinical 3 serves as a transition from student intern to employee.
Prerequisite(s): 526-213 DMS Clinical Experience 2 (or taken concurrently). Restricted to students admitted to the following program(s): 10-526-2 Diagnostic Medical Sonography.
- 526-216 DMS Clinical Experience 4** **2 cr**
Prepares the student to assume the role of a Sonographer. This course enhances the student's scanning and employee skills through clinical practice. Serves as a transition between student and employee.
Prerequisite(s): 526-215 DMS Clinical Experience 3 (or taken concurrently). Co-requisite(s): 526-217 Registry Review.
- 526-217 Registry Review** **1 cr**
Prepares students to take the ARDMS examinations. Provides a review of the Diagnostic Medical Sonography competencies.
Co-requisite(s): 526-216 DMS Clinical Experience 4.
- 526-219 Vascular Sonography 2** **2 cr**
Students will learn the theory and practice in the sonographic performance of carotid duplex and venous Doppler examinations. Furthermore, students will study the role of sonography in surgery and validation/research.
Prerequisite(s): 526-218 Vascular Sonography 1.
- 526-221 Sonography Physics 1** **3 cr**
Introduces physics and instrumentation relevant to diagnostic medical sonography. Learners explore how principles of sound propagation in tissues create a sonographic image.
Prerequisite(s): 526-200 Introduction to DMS. Co-requisite(s): 526-223 Vascular Imaging 1. Restricted to students admitted to the following program(s): 10-526-2 Diagnostic Medical Sonography.
- 526-222 Sonography Physics 2** **2 cr**
Continues the study of physics and instrumentation relevant to diagnostic medical sonography. The laboratory component of this course introduces the student to the concepts of ultrasound instrumentation, and introduction to ultrasonic scanning technique, and maintenance of ultrasound equipment.
Prerequisite(s): 526-221 Sonography Physics 1. Co-requisite(s): 526-212 OB/GYN Sonography 2. Restricted to students admitted to the following program(s): 10-526-2 Diagnostic Medical Sonography.
- 526-223 Vascular Imaging 1** **3 cr**
Introduces the principles of vascular sonographic imaging. Learners perform a variety of peripheral vascular arterial and venous duplex exams.
Prerequisite(s): 526-200 Introduction to DMS. Co-requisite(s): 526-221 Sonography Physics 1. Restricted to students admitted to the following program(s): 10-526-2 Diagnostic Medical Sonography.
- 526-224 Vascular Imaging 2** **3 cr**
Prepares learners to perform abdominal vascular and physiologic peripheral vascular exams.
Prerequisite(s): 526-223 Vascular Imaging 1. Restricted to students admitted to the following program(s): 10-526-2 Diagnostic Medical Sonography.
- 526-226 DMS Clinical Experience 2** **3 cr**
This clinical course is a blended course. During this 8 week experience the learner will have a hands-on, interactive learning experience conducted at an approved JRC-DMS clinical site/sites (if two sites are required to offer fair opportunity). Additional Course work including assignments, research, case study work up, quizzes/exams, and discussions will be required on BlackBoard. The course is designed to help prepare the student sonographer for entry level employment in the workforce. The learner will concentrate efforts on scanning first, second, and third trimester obstetrics as well as vascular and superficial structures imaging. Clinical 2 will provide further opportunity to mature and expand the skills previously acquired in a clinical setting. Students begin to function as team members under the guidance of the instructor and authorized clinical personnel.
Co-requisite(s): 526-209 DMS Clinical Experience 1. Restricted to students admitted to the following program(s): 10-526-2 Diagnostic Medical Sonography.
- 530-Medical Records**
- 530-103 Medical Insurance & Billing** **2 cr**
The focus of this course is medical insurance billing and claims processing. Requirements for processing claims from an insurance company perspective and the medical facility perspective are addressed. Specific insurance types include managed care organizations, Medicare, Medical Assistance, and commercial payers. An overview of CPT and ICD coding systems is provided. Fraud and abuse initiatives and compliance requirements are reviewed.
- 530-150 Applied HIM Technology** **3 cr**
A project-based course designed to align with current practices and the

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evolving roles in HIM. Learners will apply changes in healthcare legislation, healthcare regulatory requirements, and computer technology to the collection, storage, retrieval, analysis, reporting, and management of healthcare data. Includes further application of skills in data analysis, critical thinking, and project management.

Prerequisite(s): 530-196 Professional Prac Experience 1. Restricted to students admitted to the following program(s): 10-530-1 Health Information Technology.

530-172 Healthcare Delivery Systems 2 cr

Examines the organization, financing, regulation, and delivery of health care services. Includes the study of health care professionals.

530-176 Health Data Management 2 cr

Introduces the use and structure of health care data elements, data sets, data standards, their relationships to primary and secondary record systems and health information processing.

Prerequisite(s): 530-172 Healthcare Delivery Systems (or taken concurrently) and 530-181 Intro to the Health Record (or taken concurrently).

Restricted to students admitted to the following program(s): 10-530-1 Health Information Technology.

530-177 Hlthcare Statistics & Research 2 cr

Explores the management of medical data for statistical purposes. Focuses on descriptive statistics, including definitions, collection, calculation, compilation, and display of numerical data. Vital statistics, registries, and research are examined.

Prerequisite(s): 530-176 Health Data Management and 804-106 Intro to College Math.

530-178 Hlthcare Legal & Ethical Issues 2 cr

Examines regulations for the content, use, confidentiality, disclosure, and retention of health information. An overview of the legal system and ethical issues are addressed.

Prerequisite(s): 530-176 Health Data Management.

530-181 Intro to the Health Record 1 cr

Prepares learners to illustrate the flow of health information in various health care delivery systems and within the health information department. Prepares learners to retrieve data from health records. Professional ethics, confidentiality and security of information are emphasized.

Restricted to students admitted to the following program(s): 10-530-1 Health Information Technology.

530-182 Human Diseases for Hlth Profes 3 cr

This course focuses on the common diseases of each body system as encountered in all types of health care settings by health information professionals. Emphasis is placed on understanding the etiology (cause), signs and symptoms, diagnostic tests, and treatment (including pharmacologic) of each disease.

Prerequisite(s): (501-101 Medical Terminology (or taken concurrently) or 530-153 Medical Terminology I (or taken concurrently)) and (806-177 Gen Anatomy & Physiology (or taken concurrently) or 806-140 Anatomy & Physiology I (or taken concurrently)).

530-183 ICD-9-CM Coding 3 cr

This course prepares students to assign ICD-9-CM codes supported by medical documentation with entry-level proficiency. Students apply ICD-9-CM instructional notations, conventions, rules, and official coding guidelines when assigning ICD-9-CM codes to case studies and actual medical record documentation.

Prerequisite(s): 501-101 Medical Terminology (or taken concurrently) and 530-181 Intro to the Health Record (or taken concurrently) and 530-182 Human Diseases for Hlth Profes (or taken concurrently) and 806-177 Gen Anatomy & Physiology (or taken concurrently) or 806-189 Basic Anatomy (or taken concurrently).

530-184 Current Proc Term (CPT) Coding 3 cr

Prepares learners to assign CPT codes, supported by medical documentation, with entry level proficiency. Learners apply CPT instructional notations, conventions, rules, and official coding guidelines when assigning CPT codes to case studies and actual medical record documentation.

Prerequisite(s): 530-181 Intro to the Health Record (or taken concurrently) and 501-101 Medical Terminology (or taken concurrently) and 530-182 Human Diseases for Hlth Profes (or taken concurrently) and 806-177 Gen Anatomy & Physiology (or taken concurrently) or 806-189 Basic Anatomy (or taken concurrently).

530-185 Healthcare Reimbursement 2 cr

This course prepares learners to compare and contrast health care payers, illustrate the reimbursement cycle, and to comply with regulations related to fraud and abuse. Learners assign Diagnosis Related Groups (DRGs), Ambulatory Payment Classifications (APCs), and Resource Utilization Groups (RUGs) with entry level proficiency using computerized encoding and grouping software.

Prerequisite(s): 530-183 ICD-9-CM Coding and 530-184 Current Proc Term (CPT) Coding (or taken concurrently).

530-190 Healthcare Information Systems 3 cr

Emphasizes the role of information technology in healthcare through an investigation of the electronic health record (EHR), business, and health information software applications. Learners will develop skills to assist in information systems design and implementation.

Prerequisite(s): 106-144 Sprdsheet & Dbase Applic, Int and 150-101 PC, Networkg & Security Basics and 530-176 Health Data Management.

530-193 Healthcare Quality Management 2 cr

Explores the programs and processes used to maintain quality in healthcare. Addresses regulatory requirements as related to quality improvement, utilization (case) management, risk management, and medical staff credentialing through the use of quality improvement methodologies and tools.

Prerequisite(s): 530-177 Hlthcare Statistics & Research.

530-194 HIM Organizational Resources 2 cr

A study of the principles of management to include planning, organizing, human resource management, directing, and controlling as related to the health information department.

Prerequisite(s): 530-193 Healthcare Quality Management (or taken concurrently).

530-195 Applied Coding 2 cr

Prepares students to assign ICD and CPT/HCPCS codes supported by medical documentation with intermediate level of proficiency. Students will prepare appropriate physician queries in accordance with compliance guidelines and will assign codes to optimize appropriate reimbursement.

Prerequisite(s): 530-183 ICD-9-CM Coding and 530-184 Current Proc Term (CPT) Coding (or taken concurrently) and 530-185 Healthcare Reimbursement (or taken concurrently).

530-196 Professional Prac Experience 1 3 cr

The first of a two-semester sequence of supervised clinical experiences in healthcare facilities. This course provides application of previously acquired skills and knowledge with clinical experiences in the technical procedures of health record systems and discussion of clinical situations.

Prerequisite(s): 530-178 Hlthcare Legal & Ethical Issues and 530-177 Hlthcare Statistics & Research (or taken concurrently) and 530-183 ICD-9-CM Coding (or taken concurrently) and 530-184 Current Proc Term (CPT) Coding (or taken concurrently).

530-198 Professional Prac Experience 2 3 cr

The second of a two-semester sequence of supervised technical and man-

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agerial clinical experiences in healthcare facilities. This course provides application of previously acquired skills and knowledge and discussion of clinical situations, preparation for the certification examination and pre-graduation activities.

Prerequisite(s): 530-196 Professional Prac Experience 1 and 530-190 Healthcare Information Systems (or taken concurrently) and 530-194 HIM Organizational Resources (or taken concurrently) and 530-195 Applied Coding (or taken concurrently).

531-Emergency Medical Service

531-110 Basic Emerg Medical Technician 4 cr

This course prepares students for all aspects of emergency medical care, both medical and trauma situations, sanctioned by the Wisconsin Division of Health, at the basic level. Following the most current Wisconsin Revision of the National Standard Curriculum, this course includes didactic and practical skill information in the following areas: legal aspects, anatomy and physiology, patient assessment, critical thinking skills, airway adjuncts, fractures and dislocations, spinal injuries, soft tissue wounds, pharmacology, stroke, cardiac, diabetic, respiratory, altered mental status, pediatric, geriatric, ambulance operations, and triage. A student should be prepared to obtain 100 percent proficiency in all areas through punctuality, attendance, completion of assignments, class participation, and full cooperation with the instructor. Prerequisite: AMERICAN HEART ASSOCIATION HEALTHCARE PROVIDER CPR (531-454) or AMERICAN RED CROSS CPR FOR THE PROFESSIONAL RESCUER or AMERICAN SAFETY AND HEALTH INSTITUTE CPR PROFESSIONAL LEVEL CPR/AED or AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS PROFESSIONAL RESCUER CPR or MEDIC FIRST AID BASIC LIFE SUPPORT FOR PROFESSIONALS.

531-140 FireMedic Fundamentals 5 cr

This course orients the student to the culture, organization, and history of the Fire Based EMS-Service. Students understand the roles and responsibilities of the FireMedic. Topics include ethics, legal aspects, wellness and injury prevention, communication, documentation, history-taking, and decision-making. Several medical skills are reviewed including physical exam techniques, pathophysiology, and patient assessment. Prerequisite(s): 531-152 Paramedic Pharmacology (or taken concurrently) and 531-155 Respiratory Management (or taken concurrently). Restricted to students admitted to the following program(s): 10-531-2 FireMedic.

531-151 Paramedic Fundamentals 5 cr

This preparatory course includes: EMS Systems, Roles and Responsibilities, Well-Being of the Paramedic, Illness and Injury Prevention, Medical-Legal Aspects, Ethics, General Principles, Pathophysiology, Therapeutic Communications, History Taking, Physical Exam Techniques, Patient Assessment, Clinical Decision Making, Verbal Communications, and Documentation.

Restricted to students admitted to the following program(s): 10-531-1 Paramedic Technician, 31-531-1 EMT - Paramedic Advanced.

531-152 Paramedic Pharmacology 4 cr

This course provides the opportunity for the student to develop the knowledge and understanding of basic pharmacodynamics, medication preparation, administration of medication and selected medications used in the treatment of disorders of the major body systems.

Prerequisite(s): (531-140 FireMedic Fundamentals (or taken concurrently) or 531-151 Paramedic Fundamentals (or taken concurrently)) and 531-155 Respiratory Management (or taken concurrently).

531-155 Respiratory Management 2 cr

This course provides the student with the knowledge and skills to establish and/or maintain a patent airway, oxygenate, and ventilate a patient.

Prerequisite(s): (531-140 FireMedic Fundamentals (or taken concurrently) or 531-151 Paramedic Fundamentals (or taken concurrently)) and 531-152 Paramedic Pharmacology (or taken concurrently).

531-156 Cardiology 1 3 cr

This course will provide the student with the basic knowledge and skills to integrate pathophysiological principles and assessment findings, with ECG interpretation, in order to formulate a field impression and implement the treatment for the patient with cardiovascular disease.

Prerequisite(s): (531-140 FireMedic Fundamentals (or taken concurrently) or 531-151 Paramedic Fundamentals (or taken concurrently)) and 531-152 Paramedic Pharmacology (or taken concurrently) and 531-155 Respiratory Management (or taken concurrently).

531-157 Clinical 1-EMT/Paramedic 4 cr

The student is required to complete 288 hours of documented practical skills application and observation at the beginning EMT-Paramedic level. The student will perform required skill competencies at a variety of clinical and field internship sites under the direct supervision of an approved preceptor. Prerequisite(s): 531-155 Respiratory Management (or taken concurrently). Co-requisite(s): 531-156 Cardiology 1.

531-158 Cardiology 2 3 cr

This course provides the student with the knowledge and skills to integrate a field impression and implement a treatment plan for a patient with Acute Coronary Syndrome (ACS) and includes Advanced Cardiac Life Support Certification. The student will gain an understanding of basic 12 lead ECG interpretation as it applies to the treatment for a patient with ACS.

Prerequisite(s): 531-156 Cardiology 1 (or taken concurrently).

531-159 Medical Emergencies 3 cr

This course will provide the student with the knowledge and skills to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for patients experiencing Neurology, Endocrine, Allergic or Anaphylactic Emergencies, Gastroenterology, Renal/Urology, Toxicology, Hematology, Environmental Emergencies, Infectious and Communicable Diseases, and Behavioral and Psychiatric disorders.

Prerequisite(s): 531-156 Cardiology 1.

531-164 Trauma 3 cr

This course will provide the student with the knowledge and skills to integrate the principles of kinematics to enhance the patient assessment and predict the likelihood of injuries based on the patient's mechanism of injury. This course includes: Soft Tissue Trauma, Burns, Head and Facial Trauma, Spinal Trauma, Abdominal Trauma, Thoracic Trauma, and Mechanism of Injury Trauma Systems. This course includes PHTLS Certification.

Prerequisite(s): 531-156 Cardiology 1.

531-165 Emergency Care for Specialists 3 cr

This course will provide the student with the knowledge and skills to formulate a field impression and implement a treatment management plan for the patient experiencing a gynecology, obstetrical, neonatal, pediatric, or geriatric emergency. This course also covers the victim of abuse or assault, patients with special challenges, acute interventions in the home care patient and life span development. This course includes Pediatric Advanced Life Support (PALS) and Neonatal (NALS) Certification.

Prerequisite(s): 531-156 Cardiology 1.

531-166 EMS Operations 3 cr

This course includes Ambulance Operations, Medical Incident Command, Rescue Awareness, Weapons of Mass Destruction, Assessment Based Management, and NREMT-P prep.

Prerequisite(s): (531-164 Trauma (or taken concurrently) and 531-165 Emergency Care for Specialists (or taken concurrently)).

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531-167 Clinical 2-EMT/Paramedic **3 cr**
The student is required to complete 216 hours of documented practical skills application and observation at the beginning EMT-Paramedic level. The student will perform required skill competencies at a variety of clinical and field internship sites under the direct supervision of an approved preceptor.

Prerequisite(s): 531-157 Clinical 1-EMT/Paramedic.

531-170 FireMedic Internship **4 cr**
The student is required to complete documented practical skills application and observation at the beginning Firefighter I/EMT-Paramedic level. The student will perform required skill competencies at a fire-based EMS field internship site under the direct supervision of an approved preceptor.

Prerequisite(s): 531-164 Trauma (or taken concurrently) and 531-165 Emergency Care for Specialists (or taken concurrently). Co-requisite(s): 531-166 EMS Operations.

531-180 Intro to Adv Prehospital Care **3 cr**
This course will serve as a bridge from the EMT-Basic into Advanced Life Support course offerings inclusive of EMT-Intermediate, Paramedic and FireMedic. Course will include 16 hours of classroom and 32 hours of lab (simulation) to validate competency of EMT-Basic knowledge and skills. With competency validated, 64 hours of on-the-job training will follow with an ambulance service. This course will lead to a better prepared learner as student moved into advanced level course work with a better understanding of occupation and expectation of the work place. Prerequisite(s): 531-110 Basic Emerg Medical Technician (or taken concurrently).

531-340 EMT-Intermediate Technician **3 cr**
This course consists of 90 hours of training. This program incorporates advanced skills, beyond those of the existing EMT-Basic. Graduates will demonstrate competency in the initiation of IV therapy, administration of select medications as approved by DHFS and local medical directors via intravenous, intramuscular, subcutaneous, sublingual, and inhalation routes. Classes will be offered upon approval by CVTC and the State Board. This course is not eligible for financial aid. Prerequisite: EMT Basic.

531-350 First Aid CPR **1 cr**
This training is designed to provide the education necessary to manage an emergency until EMS arrives. In the first aid section, the student will learn about scene safety, recognition of both trauma and medical emergencies and appropriate interventions in these situations. BLS for Healthcare Provider includes techniques for adult, infant and child CPR, choking, and automated external defibrillator (AED). All training will be consistent with the most current American Heart Association guidelines. Meeting cognitive and psychomotor objectives will result in certification in the American Heart Association Heartsaver First Aid and the BLS for the Healthcare Provider. While this training is used by the general public, the BLS for Healthcare Provider training will also meet the requirements for EMT Basic and other health-related fields.

531-351 Paramedic Fundamentals **2 cr**
This introductory course establishes the fundamental principles of Emergency Medical Services including the paramedic's roles and responsibilities. The course includes essential components of paramedic knowledge such as the workings of the EMS system, medical-legal aspects, ethics, medical terminology, documentation, critical thinking, and advanced assessment skills.

Restricted to students admitted to the following program(s): 31-531-1 EMT-Paramedic Advanced.

531-352 Pharmacology for Emer Medicine **3 cr**
This course focuses on administration, absorption, distribution, metabo-

lism, and excretion of drugs, their effects on the body, and the paramedic's roles and responsibilities related to drug therapy. Prerequisite(s): (804-113 College Technical Math 1A (or taken concurrently) or 804-141 Applied Algebra (or taken concurrently)) and (806-177 Gen Anatomy & Physiology (or taken concurrently) or 806-140 Anatomy & Physiology I (or taken concurrently)). Restricted to students admitted to the following program(s): 31-531-1 EMT - Paramedic Advanced.

531-353 Airway Management **1 cr**
Course work focuses on advanced assessment of the airway, ventilation, and oxygenation. Paramedic students will be able to assess the airway and oxygenation, establish and/or maintain a patent airway, oxygenate and ventilate a patient utilizing basic and advanced skills. Much of this course is competency based. Restricted to students admitted to the following program(s): 31-531-1 EMT - Paramedic Advanced.

531-354 Trauma Care **3 cr**
This course is a study of the kinematics, pathophysiology, assessment, and management of common traumatic emergencies. Course work includes completion of Pre-Hospital Trauma Life Support (PHTLS). Prerequisite(s): 531-351 Paramedic Fundamentals and 531-352 Pharmacology for Emer Medicine and 531-353 Airway Management and 531-355 Cardiovascular Emergencies and 531-370 Clinical I and (804-113 College Technical Math 1A or 804-141 Applied Algebra) and (806-177 Gen Anatomy & Physiology or 806-140 Anatomy & Physiology I).

531-355 Cardiovascular Emergencies **4 cr**
This course is a study of the pathophysiology, assessment, and management of common cardiovascular diseases. Course work comprises of basic and advanced electrocardiogram interpretation, including 12-lead ECGs and completion of Advanced Cardiac Life Support (ACLS). Prerequisite(s): 806-140 Anatomy & Physiology I (or taken concurrently) or 806-177 Gen Anatomy & Physiology (or taken concurrently). Restricted to students admitted to the following program(s): 31-531-1 EMT - Paramedic Advanced.

531-356 Maternal & Pediatric Emergen **3 cr**
Paramedic students will explore the pathophysiology, assessment, and management of common obstetrical, gynecological, pediatric, and neonatal diseases including newborn delivery and pediatric/neonatal resuscitation. Course includes completion of Pediatric Advanced Life Support (PALS) and Pediatric Education for Prehospital Professionals (PEPP). Prerequisite(s): 531-354 Trauma Care (or taken concurrently).

531-357 Medical Emergencies **4 cr**
This course is a study of the pathophysiology, assessment, and management of common medical emergencies including pulmonary, neurologic, endocrine, gastroenteral, renal/urologic, toxicologic, hematologic, environmental, infectious, and behavioral.

Prerequisite(s): 531-351 Paramedic Fundamentals and 531-352 Pharmacology for Emer Medicine and 531-353 Airway Management and 531-355 Cardiovascular Emergencies and 531-370 Clinical I and (804-113 College Technical Math 1A or 804-141 Applied Algebra) and (806-177 Gen Anatomy & Physiology or 806-140 Anatomy & Physiology I).

531-358 EMS Operations **1 cr**
Upon completion of this course, the paramedic student will be able to safely manage the scene of an emergency. Course studies include multiple casualty incident management, rescue operations, hazardous materials, crime scene awareness, aeromedical transport, and ambulance operations. Prerequisite(s): 531-354 Trauma Care and 531-356 Maternal & Pediatric Emergen and 531-357 Medical Emergencies and 531-371 Clinical II.

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531-370 Clinical I

1 cr

This clinical experience emphasizes airway assessment and management, patient assessment, and patient care. A portion of this clinical experience will be spent in the operating room practicing airway assessment and management skills while another portion will be spent in the emergency department practicing patient assessment and care.

Prerequisite(s): 531-352 Pharmacology for Emer Medicine (or taken concurrently) and 531-353 Airway Management (or taken concurrently). Restricted to students admitted to the following program(s): 31-531-1 EMT - Paramedic Advanced.

531-371 Clinical II

3 cr

This course emphasizes the application of critical thinking skills, advanced assessment, and patient care. Clinical time will be spent in a variety of patient care settings including respiratory therapy, emergency department, critical care, labor and delivery, aeromedical transport, and EMS.

Prerequisite(s): 531-357 Medical Emergencies (or taken concurrently).

531-374 Advanced Life Support Skills

1 cr

This course is designed as an update on current trends in Paramedic care for adults, pediatrics, and infants. Students will review and employ the latest skills found within the Paramedic's scope of practice and commonly performed by Paramedics on 911, interfacility, and in-hospital patient contacts. Skills covered include: Advanced assessment techniques, basic and advanced airway management, including numerous techniques for tracheal intubation, surgical airways, and rapid sequence intubation (RSI), electrical therapy, medication administration, vascular access, chest decompression, chest tube management, arterial and central line management, emergency child birth, and GI/GU catheterization. Students must be licensed Paramedic, RNs, or Paramedic students in their final semester of the Paramedic program.

Prerequisite(s): 531-354 Trauma Care and 531-356 Maternal & Pediatric Emergen and 531-357 Medical Emergencies and 531-371 Clinical II.

531-375 Internship I

3 cr

During this course, the paramedic intern will function in the prehospital setting under the supervision of the paramedic preceptor. Paramedic interns will progress from the level of observation to that of an active team member. Upon completion, students will be able to perform as an effective member of the patient care team.

Prerequisite(s): 531-354 Trauma Care and 531-356 Maternal & Pediatric Emergen and 531-357 Medical Emergencies and 531-371 Clinical II.

531-376 Internship II

2 cr

This course incorporates everything the paramedic intern has learned throughout the program. During this course, the paramedic intern will progress from the role of team member to that of the patient care team leader. Upon completion, students will be able to manage the scene of an emergency, assess patients, formulate a patient care plan based upon their assessment, and initiate that plan with the same competency of a newly licensed paramedic in the prehospital environment.

Prerequisite(s): 531-375 Internship I (or taken concurrently).

534-Central Services Tech/Asst

534-300 Central Serv Tech, Fundamentals

3 cr

Introduces packaging, cleaning techniques, care, handling, identification, and usage of instruments, equipment and supplies, basic aseptic techniques and patient centered practices in the lab setting. Students will also spend time working in a Central Service Department at a local hospital.

Restricted to students admitted to the following program(s): 30-534-1 Central Serv Technician.

534-301 Central Serv Tech, Intro to

2 cr

Introduces the learner to the central service department, its layout, and functions (sterilization, distribution, decontamination) within the hospital. Legal and ethical aspects of working in this critical department are also covered.

Co-requisite(s): 534-300 Central Serv Tech, Fundamentals. Restricted to students admitted to the following program(s): 30-534-1 Central Serv Technician.

534-302 Central Serv Tech Clinical

1 cr

Learner is given the opportunity to apply what they have learned in the clinical setting at a local hospital. Time will be spent in the central service department as well as the operating room.

Prerequisite(s): 501-101 Medical Terminology (or taken concurrently) and 103-102 Microsoft Office Suite (or taken concurrently) and 534-300 Central Serv Tech, Fundamentals (or taken concurrently) and 806-301 Basic Microbiology (or taken concurrently). Restricted to students admitted to the following program(s): 30-534-1 Central Serv Technician.

536-Pharmacy

536-110 Pharmaceutical Calculations

3 cr

Prepares the learner to convert weights and volumes between the avoirdupois, the apothecary, and the metric systems of measurement; utilize ratios and proportions; reduce and enlarge pharmaceutical formulas; calculate medication quantities from percent w/w, w/v, v/v, pm, and ratio concentrations; perform dilution calculations; utilize the allegation method; solve problems related to electrolyte solutions; convert temperatures between the Fahrenheit and Celsius scales; convert military and standard time; and calculate individualized patient dosages based on body surface area, age, and/or weight of the patient.

Prerequisite(s): 501-101 Medical Terminology (or taken concurrently).

Co-requisite(s): 536-112 Pharmacy Business Apps and 536-115 Pharmacy Law and 536-120 Reading Prescriptions, Fund of and 536-134 Pharmacy Benefits-Managing and 536-138 Pharmacy Community Clinical. Restricted to students admitted to the following program(s): 31-536-1 Pharmacy Technician.

536-112 Pharmacy Business Apps

3 cr

This course prepares the learner to summarize pharmacy policies dealing with the Health Insurance Privacy and Portability Act (HIPPA), analyze criminal activities in the pharmacy, assess the operation and location of pharmacy equipment, utilize information posted in the pharmacy, analyze the work culture of the pharmacy, analyze the steps in processing a prescription, analyze patient profile information, analyze issues affecting the practice of pharmacy, market employment skills, analyze patient safety issues, analyze pharmacy front of store operations, analyze methods used to prepare extemporaneous compounds, and analyze customer service issues.

Co-requisite(s): 536-110 Pharmaceutical Calculations and 536-115 Pharmacy Law and 536-120 Reading Prescriptions, Fund of and 536-134 Pharmacy Benefits-Managing and 536-138 Pharmacy Community Clinical. Restricted to students admitted to the following program(s): 31-536-1 Pharmacy Technician.

536-115 Pharmacy Law

2 cr

This course prepares the learner to apply Federal laws to the practice of pharmacy; apply Wisconsin State laws to the practice of pharmacy; select appropriate drug products for substitution in accordance with the law; explain the Investigational New Drug (IND) process; explain pharmacy equipment, license, and floor plan legal requirements; apply controlled substance laws to the procurement, processing, and record keeping of controlled substances; analyze the history of pharmacy law; and summarize drug law enforcement agencies.

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Co-requisite(s): 536-110 Pharmaceutical Calculations and 536-112 Pharmacy Business Apps and 536-120 Reading Prescriptions, Fund of and 536-134 Pharmacy Benefits-Managing and 536-138 Pharmacy Community Clinical. Restricted to students admitted to the following program(s): 31-536-1 Pharmacy Technician.

536-120 Reading Prescriptions, Fund of **2 cr**

This course prepares the learner to match the brand name and generic name of commonly prescribed medications, determine the pharmacologic classes of commonly prescribed medications, determine the appropriate auxiliary labels to be placed on prescription bottles for commonly prescribed medications, determine if a prescribed medication is a controlled substance and to which schedule it belongs, analyze prescriptions for appropriateness of drug and dosing schedule, and interpret Latin abbreviations used in the practice of pharmacy.

Co-requisite(s): 536-110 Pharmaceutical Calculations and 536-112 Pharmacy Business Apps and 536-115 Pharmacy Law and 536-134 Pharmacy Benefits-Managing and 536-138 Pharmacy Community Clinical. Restricted to students admitted to the following program(s): 31-536-1 Pharmacy Technician.

536-122 Pharmacology for Pharmacy Tech **2 cr**

Prepares the learner to summarize treatments for diseases of the Musculoskeletal, Dermatologic, Endocrine, Reproductive, Cardiovascular, Respiratory, Hematologic, Immune, Nervous, Gastrointestinal, Renal eyes, ears, nose, and throat, as well as the use of antineoplastic and geriatric drugs.

Co-requisite(s): 536-124 Pharmacy Drug Dist. Systems and 536-126 Pharmacy Parenteral Admixtures and 536-140 Pharmacy Hospital Clinical and 536-141 Hospital Pharmacy Lab. Restricted to students admitted to the following program(s): 31-536-1 Pharmacy Technician.

536-124 Pharmacy Drug Dist. Systems **1 cr**

Prepares the learner to analyze the changes occurring in institutional health care and the consequences for pharmacists and pharmacy technicians, analyze the unit dose packaging and distribution system, compare various hospital or nursing home pharmacy administrative and physical designs, compare different distribution systems used in hospital or nursing homes, and interview for a job.

Prerequisite(s): 536-112 Pharmacy Business Apps and 536-134 Pharmacy Benefits-Managing and 536-138 Pharmacy Community Clinical.

Co-requisite(s): 536-122 Pharmacology for Pharmacy Tech and 536-126 Pharmacy Parenteral Admixtures and 536-140 Pharmacy Hospital Clinical and 536-141 Hospital Pharmacy Lab. Restricted to students admitted to the following program(s): 31-536-1 Pharmacy Technician.

536-126 Pharmacy Parenteral Admixtures **3 cr**

Prepares the learner to utilize supplies used in preparation of parenteral admixtures, compare common parenteral solutions, identify equipment to prepare parenteral products, differentiate various parenteral administration routes, prepare parenteral admixtures using aseptic technique, prevent incompatibilities from occurring in parenteral admixtures, prepare cytotoxic medications, prepare total parenteral nutrition products, and perform parenteral admixture calculations.

Co-requisite(s): 536-122 Pharmacology for Pharmacy Tech and 536-124 Pharmacy Drug Dist. Systems and 536-140 Pharmacy Hospital Clinical and 536-141 Hospital Pharmacy Lab. Restricted to students admitted to the following program(s): 31-536-1 Pharmacy Technician.

536-134 Pharmacy Benefits-Managing **1 cr**

This course prepares the learner to utilize terminology pertinent to third party reimbursements in the field of pharmacy, analyze the various popular formulary systems, calculate the selling price for a prescription based on the Average Wholesale Price (AWP) and the formula required by the Pharmacy Benefit Manager, analyze the role of the Pharmacy Benefits

Manager in the health care system, and summarize medical coverage provided by government agencies.

Co-requisite(s): 536-110 Pharmaceutical Calculations and 536-112 Pharmacy Business Apps and 536-115 Pharmacy Law and 536-120 Reading Prescriptions, Fund of and 536-138 Pharmacy Community Clinical.

Restricted to students admitted to the following program(s): 31-536-1 Pharmacy Technician.

536-138 Pharmacy Community Clinical **2 cr**

This course prepares the learner to apply policies and procedures in the pharmacy, complete the ordering process to meet inventory goals, bill third parties for patient prescriptions, process prescriptions, identify medical and surgical supplies for customers, process controlled substance prescriptions, compound extemporaneous products, maintain patient medical histories, and fulfill duties in unique service areas.

Co-requisite(s): 536-110 Pharmaceutical Calculations and 536-112 Pharmacy Business Apps and 536-115 Pharmacy Law and 536-120 Reading Prescriptions, Fund of and 536-134 Pharmacy Benefits-Managing. Restricted to students admitted to the following program(s): 31-536-1 Pharmacy Technician.

536-140 Pharmacy Hospital Clinical **2 cr**

In this course, students will have the opportunity to experience the daily activities of a pharmacy technician in a hospital pharmacy setting. Students will learn how medication orders are prepared, processed, and delivered along with maintaining medication inventory in several areas, interacting with other medical staff and following policies and procedures of the hospital and pharmacy.

Co-requisite(s): 536-122 Pharmacology for Pharmacy Tech and 536-124 Pharmacy Drug Dist. Systems and 536-126 Pharmacy Parenteral Admixtures and 536-141 Hospital Pharmacy Lab. Restricted to students admitted to the following program(s): 31-536-1 Pharmacy Technician.

536-141 Hospital Pharmacy Lab **2 cr**

This course is a blend of both hands-on lab activities and clinical site experiences in daily tasks performed by pharmacy technicians in inpatient settings. Topics covered include unit-dose packaging, filling of unit dose charts, IV compounding, interpreting physician orders, and utilization of aseptic technique in laminar flow hood settings.

Co-requisite(s): 536-122 Pharmacology for Pharmacy Tech and 536-124 Pharmacy Drug Dist. Systems and 536-126 Pharmacy Parenteral Admixtures and 536-140 Pharmacy Hospital Clinical. Restricted to students admitted to the following program(s): 31-536-1 Pharmacy Technician.

543-Nursing

543-101 Nursing Fundamentals **2 cr**

This course focuses on basic nursing concepts that the beginning nurse will need to provide care to diverse patient populations across the lifespan. Current and historical issues impacting nursing will be explored within the scope of nursing practice. The nursing process will be introduced as a framework for organizing the care of patients with alterations in cognition, elimination, comfort, grief/loss, mobility, integument, and fluid/electrolyte balance. Note: For Online offerings of this course: Online test dates are announced/posted in advance for students. Faculty will list in syllabus how far ahead students may work in an online course. Online courses are NOT self-paced or independent study. Faculty will list in the syllabus use of acceptable proctors. Faculty will NOT leave tests open more than one day unless pre-arranged and agreed upon in advance. Prerequisite(s): 806-177 Gen Anatomy & Physiology (or taken concurrently) or 804-140 Basic Algebra. Restricted to students admitted to the following program(s): 10-543-1 Nursing-Assoc Degree, 31-543-1 Practical Nursing.

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543-102 Nursing Skills

3 cr

This course focuses on development of clinical skills and physical assessment across the lifespan. Content includes mathematic calculations and conversions related to clinical skills, blood pressure assessment, aseptic technique, wound care, oxygen administration, tracheostomy care, suctioning, management of enteral tubes, basic medication administration, glucose testing, enemas, ostomy care, and catheterization. In addition the course includes techniques related to obtaining a health history and basic physical assessment skills using a body systems approach.

Prerequisite(s): 543-101 Nursing Fundamentals (or taken concurrently) and 543-103 Nursing Pharmacology (or taken concurrently) and (806-177 Gen Anatomy & Physiology (or taken concurrently) or 806-140 Anatomy & Physiology I). Restricted to students admitted to the following program(s): 10-543-1 Nursing-Assoc Degree, 31-543-1 Practical Nursing.

543-103 Nursing Pharmacology

2 cr

This course introduces the principles of pharmacology, including drug classifications and their effects on the body. Emphasis is on the use of the components of the nursing process when administering medications. Note: For Online offerings of this course: Online test dates are announced/posted in advance for students. Faculty will list in syllabus how far ahead students may work in an online course. Online courses are NOT self-paced or independent study. Faculty will list in the syllabus use of acceptable proctors. Faculty will NOT leave tests open more than one day unless pre-arranged and agreed upon in advance.

Prerequisite(s): 806-177 Gen Anatomy & Physiology (or taken concurrently) or 806-140 Anatomy & Physiology I. Restricted to students admitted to the following program(s): 31-543-1 Practical Nursing, 10-543-1 Nursing-Assoc Degree.

543-104 Nsg: Intro Clinical Practice

2 cr

This introductory clinical course emphasizes basic nursing skills and application of the nursing process in meeting the needs of diverse clients across the lifespan. Emphasis is placed on performing basic nursing skills, the formation of nurse-client relationships, communication, data collection, documentation, and medication administration.

Prerequisite(s): 543-101 Nursing Fundamentals (or taken concurrently) and 543-102 Nursing Skills (or taken concurrently) and 543-103 Nursing Pharmacology (or taken concurrently) and (806-177 Gen Anatomy & Physiology (or taken concurrently) or 806-140 Anatomy & Physiology I). Restricted to students admitted to the following program(s): 31-543-1 Practical Nursing, 10-543-1 Nursing-Assoc Degree.

543-105 Nursing Health Alterations

3 cr

This course elaborates upon the basic concepts of health and illness as presented in Nursing Fundamentals. It applies theories of nursing in the care of clients through the lifespan, utilizing problem solving and critical thinking. This course will provide an opportunity to study conditions affecting different body systems and apply therapeutic nursing interventions. It will also introduce concepts of leadership, team building, and scope of practice. Note: For Online offerings of this course: Online test dates are announced/posted in advance for students. Faculty will list in syllabus how far ahead students may work in an online course. Online courses are NOT self-paced or independent study. Faculty will list in the syllabus use of acceptable proctors. Faculty will NOT leave tests open more than one day unless pre-arranged and agreed upon in advance.

Prerequisite(s): 543-101 Nursing Fundamentals and 543-102 Nursing Skills and 543-103 Nursing Pharmacology and 543-104 Nsg: Intro Clinical Practice and (806-177 Gen Anatomy & Physiology or 806-140 Anatomy & Physiology I) and (809-188 Developmental Psychology (or taken concurrently) or 809-130 Developmental Psychology). Restricted

to students admitted to the following program(s): 31-543-1 Practical Nursing, 10-543-1 Nursing-Assoc Degree.

543-106 Nursing Health Promotion

3 cr

This course will cover topics related to health promotion in the context of the family throughout the lifespan. We will cover nursing care of the developing family, which includes reproductive issues, pregnancy, labor and delivery, post-partum, the newborn, and the child. Recognizing the spectrum of health families we will discern patterns associated with adaptive and maladaptive behaviors applying mental health principles. An emphasis is placed on teaching and supporting healthy lifestyle choices for individuals of all ages. Nutrition, exercise, stress management, empowerment, and risk reduction practices are highlighted. Study of the family will cover dynamics, functions, discipline styles, and stages of development. Note: For Online offerings of this course: Online test dates are announced/posted in advance for students. Faculty will list in syllabus how far ahead students may work in an online course. Online courses are NOT self-paced or independent study. Faculty will list in the syllabus use of acceptable proctors. Faculty will NOT leave tests open more than one day unless pre-arranged and agreed upon in advance.

Prerequisite(s): 543-101 Nursing Fundamentals and 543-102 Nursing Skills and 543-103 Nursing Pharmacology and 543-104 Nsg: Intro Clinical Practice and (806-177 Gen Anatomy & Physiology or 806-140 Anatomy & Physiology I) and (809-188 Developmental Psychology (or taken concurrently) or 809-130 Developmental Psychology). Restricted to students admitted to the following program(s): 10-543-1 Nursing-Assoc Degree, 31-543-1 Practical Nursing.

543-107 Nsg: Clin Care Across Lifespan

2 cr

This clinical experience applies nursing concepts and therapeutic interventions to clients across the lifespan. It also provides an introduction to concepts of teaching and learning. Extending care to include the family is emphasized.

Prerequisite(s): 543-101 Nursing Fundamentals and 543-102 Nursing Skills and 543-103 Nursing Pharmacology and 543-104 Nsg: Intro Clinical Practice and 543-105 Nursing Health Alterations (or taken concurrently). Restricted to students admitted to the following program(s): 10-543-1 Nursing-Assoc Degree, 31-543-1 Practical Nursing.

543-108 Nsg: Intro Clinical Care Mgt

2 cr

This clinical experience applies nursing concepts and therapeutic nursing interventions to groups of clients across the lifespan. It also provides an introduction to leadership, management, and team building.

Prerequisite(s): 543-101 Nursing Fundamentals and 543-102 Nursing Skills and 543-103 Nursing Pharmacology and 543-104 Nsg: Intro Clinical Practice and (809-188 Developmental Psychology (or taken concurrently) or 809-130 Developmental Psychology) and 543-106 Nursing Health Promotion (or taken concurrently). Restricted to students admitted to the following program(s): 10-543-1 Nursing-Assoc Degree, 31-543-1 Practical Nursing.

543-109 Nsg: Complex Health Alterat 1

3 cr

This course prepares the learner to expand knowledge from previous courses in caring for clients across the lifespan with alterations in cardiovascular, respiratory, endocrine, and hematologic systems as well as clients with fluid/electrolyte and acid-base imbalance, and alterations in comfort. Note: For Online offerings of this course: Online test dates are announced/posted in advance for students. Faculty will list in syllabus how far ahead students may work in an online course. Online courses are NOT self-paced or independent study. Faculty will list in the syllabus use of acceptable proctors. Faculty will NOT leave tests open more than one day unless pre-arranged and agreed upon in advance.

Prerequisite(s): 543-105 Nursing Health Alterations and 543-106 Nurs-

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ing Health Promotion and 543-107 Nsg: Clin Care Across Lifespan and 543-108 Nsg: Intro Clinical Care Mgt and (806-179 Adv Anatomy & Physiology or 806-141 Anatomy & Physiology II) and (806-197 Microbiology (or taken concurrently)). Restricted to students admitted to the following program(s): 10-510-1 Nursing-Associate Degree, 10-543-1 Nursing-Assoc Degree.

543-110 Nsg: Mental Health Comm Con **2 cr**

This course will cover topics related to the delivery of community and mental health care. Specific health needs of individuals, families, and groups will be addressed across the lifespan. Attention will be given to diverse and at-risk populations. Mental health concepts will concentrate on adaptive/maladaptive behaviors and specific mental health disorders. Community resources will be examined in relation to specific types of support offered to racial, ethnic, economically diverse individuals and groups. Note: For Online offerings of this course: Online test dates are announced/posted in advance for students. Faculty will list in syllabus how far ahead students may work in an online course. Online courses are NOT self-paced or independent study. Faculty will list in the syllabus use of acceptable proctors. Faculty will NOT leave tests open more than one day unless pre-arranged and agreed upon in advance.

Prerequisite(s): 543-105 Nursing Health Alterations and 543-106 Nursing Health Promotion and 543-107 Nsg: Clin Care Across Lifespan and 543-108 Nsg: Intro Clinical Care Mgt and (806-179 Adv Anatomy & Physiology or 806-141 Anatomy & Physiology II). Restricted to students admitted to the following program(s): 10-510-1 Nursing-Associate Degree, 10-543-1 Nursing-Assoc Degree.

543-111 Nsg: Intermed Clin Practice **3 cr**

This intermediate level clinical course develops the RN role when working with clients with complex health care needs. A focus of the course is developing skills needed for managing multiple clients and priorities. Using the nursing process students will gain experience in adapting nursing practice to meet the needs of clients with diverse needs and backgrounds.

Prerequisite(s): 543-109 Nsg: Complex Health Alterat 1 (or taken concurrently) and 543-110 Nsg: Mental Health Comm Con (or taken concurrently) and 543-112 Nursing Advanced Skills (or taken concurrently) and (809-198 Intro to Psychology (or taken concurrently) or 809-199 Psychology of Human Relations (or taken concurrently)) and 806-197 Microbiology (or taken concurrently) and (806-179 Adv Anatomy & Physiology or 806-141 Anatomy & Physiology II). Restricted to students admitted to the following program(s): 10-510-1 Nursing-Associate Degree, 10-543-1 Nursing-Assoc Degree.

543-112 Nursing Advanced Skills **1 cr**

This course focuses on the development of advanced clinical skills across the lifespan. Content includes advanced IV skills, blood product administration, chest tube systems, basic EKG interpretation and nasogastric/feeding tube insertion.

Prerequisite(s): 543-105 Nursing Health Alterations and 543-106 Nursing Health Promotion and 543-107 Nsg: Clin Care Across Lifespan and 543-108 Nsg: Intro Clinical Care Mgt and (806-179 Adv Anatomy & Physiology or 806-141 Anatomy & Physiology II). Restricted to students admitted to the following program(s): 10-510-1 Nursing-Associate Degree, 10-543-1 Nursing-Assoc Degree.

543-113 Nsg: Complex Health Alterat 2 **3 cr**

This course prepares the learner to expand knowledge and skills from previous courses in caring for clients across the lifespan with alterations in the immune, neuro-sensory, musculoskeletal, gastrointestinal, hepatobiliary, renal/urinary and the reproductive systems. The learner

will also focus on management of care for clients with high-risk perinatal conditions, high-risk newborns and the ill child. Synthesis and application of previously learned concepts will be evident in the management of clients with critical/life threatening situations. Note: For Online offerings of this course: Online test dates are announced/posted in advance for students. Faculty will list in syllabus how far ahead students may work in an online course. Online courses are NOT self-paced or independent study. Faculty will list in the syllabus use of acceptable proctors. Faculty will NOT leave tests open more than one day unless pre-arranged and agreed upon in advance.

Prerequisite(s): 543-109 Nsg: Complex Health Alterat 1 and 543-110 Nsg: Mental Health Comm Con and 543-111 Nsg: Intermed Clin Practice and 543-112 Nursing Advanced Skills and (809-198 Intro to Psychology or 809-199 Psychology of Human Relations) and (806-197 Microbiology or 806-132 Applied Microbiology).

543-114 Nsg: Mgt & Profess Concepts **2 cr**

This course covers nursing management and professional issues related to the role of the RN. Emphasis is placed on preparing for the RN practice. Note: For Online course offerings of this course: Online test dates are announced/posted in advance for students. Faculty will list in syllabus how far ahead students may work in an online course. Online courses are NOT self-paced or independent study. Faculty will list in the syllabus use of acceptable proctors. Faculty will NOT leave tests open more than one day unless pre-arranged and agreed upon in advance.

Prerequisite(s): 543-109 Nsg: Complex Health Alterat 1 and 543-110 Nsg: Mental Health Comm Con and 543-111 Nsg: Intermed Clin Practice and 543-112 Nursing Advanced Skills and (809-198 Intro to Psychology or 809-199 Psychology of Human Relations) and (806-197 Microbiology or 806-132 Applied Microbiology).

543-115 Nsg: Adv Clinical Practice **3 cr**

This advanced clinical course requires the student to integrate concepts from all previous courses in the management of groups of clients facing complex health alterations. Students will have the opportunity to further develop critical thinking skills using the nursing process in making clinical decisions. Continuity of care through interdisciplinary collaboration is emphasized.

Prerequisite(s): 543-109 Nsg: Complex Health Alterat 1 and 543-110 Nsg: Mental Health Comm Con and 543-111 Nsg: Intermed Clin Practice and 543-112 Nursing Advanced Skills and (809-198 Intro to Psychology or 809-199 Psychology of Human Relations) and (806-197 Microbiology or 806-132 Applied Microbiology) and 543-113 Nsg: Complex Health Alterat 2 (or taken concurrently).

543-116 Nursing Clinical Transition **2 cr**

This clinical experience prepares the student to assume the role of graduate nurse. The course promotes clinical decision-making, delegation, and collaboration to achieve client and organizational outcomes. Continued professional development is fostered.

Prerequisite(s): 543-109 Nsg: Complex Health Alterat 1 and 543-110 Nsg: Mental Health Comm Con and 543-111 Nsg: Intermed Clin Practice and 543-112 Nursing Advanced Skills and (809-198 Intro to Psychology or 809-199 Psychology of Human Relations) and (806-197 Microbiology or 806-132 Applied Microbiology) and (543-113 Nsg: Complex Health Alterat 2 (or taken concurrently) and 543-114 Nsg: Mgt & Profess Concepts (or taken concurrently) and 543-115 Nsg: Adv Clinical Practice (or taken concurrently)).

543-143 Cultural Diversity in Hlth Care **3 cr**

Health care providers frequently encounter clients from various cultural backgrounds. This course is designed to help students learn more about their own backgrounds and that of people from other cultures. Students will discover ways to interact respectfully with culturally diverse clients.

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543-300 Nursing Assistant

3 cr

This 120-hour course is a combination lecture, lab in a classroom and clinical practice conducted in long-term care facilities. It covers basic body function and structure, nutrition, nursing care procedures, and ethical and legal considerations. This course is recognized by the Wisconsin Department of Health Services as a nursing assistant training program. For successful completion you'll need to have access to a computer with an Internet hookup. This could be in your home, at a nearby library, at one of the CVTC branch campuses, or another location that is convenient for you. This course is not eligible for financial aid.

543-300A Nursing Assistant

3 cr

This course is a combination of classroom and clinical practice conducted in long-term care facilities. It covers basic body function and structure, nutrition, nursing care procedures, and ethical and legal considerations. This course is recognized by the Wisconsin Department of Health and Social Services as a nursing assistant/home health aide training program. Usually runs in eight-week segments.

550-Alcohol & Other Drug Abuse Svcs

550-102 AODA Counseling/Interviewing

3 cr

Introduction and application of basic counseling/communication micro-skills used in individual and group therapy. Miller's Motivational Interviewing is the foundation for utilizing these skills with substance use disorder patients. Learners will record and critique practice in the lab setting and must demonstrate effective counseling skills.

Prerequisite(s): 550-113 Intro to Prev&Trtmt Profession and 550-114 Ethics & Public Policy and 801-196 Oral/Interpersonal Comm and 809-198 Intro to Psychology and 550-108 Substance Use: Risk & Reality.

550-104 Internship I

2 cr

Learners spend eight hours per week over 16 weeks (total 128 hours) at a clinical site to observe, and get some introductory practice in the substance use disorder counselor eight practice dimensions (the basic tasks and responsibilities that constitute the work of a substance use disorder counselor), and 12 core functions (the observation and practice of skills while treating substance use disorder patients under the close supervision of a clinical supervisor). Learners read agency policies and procedures, document clinical hours, develop a learning plan, submit weekly clinical notes on progress toward plan goals, complete written assignments and tests, engage in discussion, and demonstrate core function knowledge and professionalism and employability skills. Eight hours are allocated for on-campus seminars held throughout the internship. Learners apply for the Wisconsin entry-level SAC-IT license near the end of the course.

Prerequisite(s): 550-102 AODA Counseling/Interviewing and 550-161 AODA and Corrections and 550-111 Group Facilitation (or taken concurrently) and 809-188 Developmental Psychology and 550-110 Theories & Methods of AODA Trt and 550-154 Culturally Skilled Counseling and (806-177 Gen Anatomy & Physiology (or taken concurrently) or 806-189 Basic Anatomy (or taken concurrently).

550-106 Internship Advanced I

3 cr

Learners spend 24 hours per week over 16 weeks at a treatment-providing agency for the first eight weeks of the semester (total 192 hours). They integrate knowledge, skills, and attitudes acquired in the first three semesters through practice of the eight professional practice dimensions and twelve core functions of substance use disorder counselors while supervised by a licensed clinical supervisor. Learners document clinical hours, develop a learning plan, submit weekly clinical notes on progress toward plan goals, complete written assignments, engage in discussion, demonstrate core function practice, professionalism and employability skills, and apply for the SAC license.

Prerequisite(s): 550-104 Internship I and 550-111 Group Facilitation and

550-115 AODA Assess & Treatment Plng and 550-154 Culturally Skilled Counseling and 550-160 Psychiatric Disease and AODA and (530-180 Info Mgmt for Prev & Trtmt or 550-121 Info Mgmt for Prev & Treatment) and 550-122 Pharmacology-Substance Abuse. Co-requisite(s): 550-107 Internship Advanced II and 550-150 Issues-Internship II Seminar.

550-107 Internship Advanced II

3 cr

Learners continue practical field experience started in 550-106 Internship Advanced I for 24 hours per week over the second eight weeks of the semester. Learners document clinical hours, submit weekly clinical notes on progress toward learning plan goals, complete written assignments, engage in discussion, and demonstrate core function competency and professionalism and employability skills.

Co-requisite(s): 550-106 Internship Advanced I and 550-150 Issues-Internship II Seminar.

550-108 Substance Use: Risk & Reality

3 cr

Available to all students interested in understanding levels of risk associated with substance use and successful methods of prevention for reducing problems over the entire lifespan at community and family levels, this is a required course for students enrolled in the AODA associate degree program. Topics include: risk associated with substance use; making low-risk choices; reducing risks (for those who do not already have a substance use disorder) of experiencing substance-related health or impairment problems; communicating family expectations for behavior and clarifying what is acceptable regarding substance use; expanding prevention practices to the community.

550-110 Theories & Methods of AODA Trt

3 cr

After an introduction and overview of psychoanalytic, Adlerian and Existential theory, learners study and practice common therapies and their uses for substance use disorder treatment: person-centered, Gestalt, cognitive-behavioral, reality, and others as time permits. Learners are introduced to 12-step approaches, attend self-help group meetings, read textbooks, complete written assignments, practice theory-based techniques, and take written exams.

Prerequisite(s): 550-113 Intro to Prev&Trtmt Profession and 550-114 Ethics & Public Policy and 801-195 Written Communications and 809-198 Intro to Psychology and 550-108 Substance Use: Risk & Reality.

550-111 Group Facilitation

2 cr

Introduction to theory and practice of group dynamics. Knowledge areas covered are: ethical considerations, effective group leadership, and stages of group development. Learners will record and critique practice in the lab setting, will function as group members, and must demonstrate effective group facilitation skills.

Prerequisite(s): 550-102 AODA Counseling/Interviewing and 550-110 Theories & Methods of AODA Trt and 809-188 Developmental Psychology and 550-154 Culturally Skilled Counseling.

550-113 Intro to Prev&Trtmt Profession

3 cr

Explore the causes and effects of substance use disorders. Outline assessment criteria for clinical identification of these disorders and effective treatment techniques. Differentiate prevention from treatment approaches and resources. Investigate own lifestyles choices. Discover history of the profession, current issues, professional and ethical standards, knowledge and skills expectations for substance use disorder counseling.

Restricted to students admitted to the following program(s): 10-550-1 Alcohol & Oth Drug Abuse Assoc.

550-114 Ethics & Public Policy

3 cr

Examine personal attitudes, values, and motivations regarding working in the treatment profession. Apply federal and state guidelines to case examples in the areas of confidentiality, patients' rights, dual relationships, fraudulent behavior, and other ethical issues. Become familiar with and

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adhere to the state substance use disorder counselor code book. Review the intent and effectiveness of public policies relative to the treatment profession. Advocacy on current policy issues affected by managed care and government structure and process.

Restricted to students admitted to the following program(s): 10-550-1 Alcohol & Oth Drug Abuse Assoc.

550-115 AODA Assess & Treatment Plng 3 cr

Practice clinical evaluation/assessment and treatment planning for substance use disorders. Differentiate screening and diagnostic tools. Demonstrate effective interviewing skills to collect relevant patient history/data. Demonstrate diagnostic and documentation skills using current DSM criteria for substance use disorders and Wisconsin UPC guidelines. Write treatment plans based on evaluation findings. Learners will complete interview and documentation practice, along with reading, written assignments and exams.

Prerequisite(s): 550-102 AODA Counseling/Interviewing and 550-110 Theories & Methods of AODA Trt and 550-121 Info Mgmt for Prev & Treatment (or taken concurrently) and 550-160 Psychiatric Disease and AODA (or taken concurrently) and 801-197 Technical Reporting and 550-154 Culturally Skilled Counseling and (806-177 Gen Anatomy & Physiology (or taken concurrently) or 806-189 Basic Anatomy (or taken concurrently)).

550-116 Understndng the Dysfunc Family 3 cr

Students will study the basic concepts of dysfunction in the family, including the relationship of role functioning, communication, socio-cultural impact, and physical influences on abusive families, addictive behaviors in the family, and chronic illness. Successful intervention and treatment modalities to provide holistic health care for the dysfunctional family will be presented. Recent research findings will be shared and applied in class.

550-120 Family & Community Systems 3 cr

An introduction to the systems view of family. Identify family-centered approaches, including brief solution-focused therapy, in preventing and treating substance abuse. Learners draw on their own family system to learn how to use genograms and evaluate family life cycles in the larger context. Learners read textbooks, complete written assignments and exams, practice family therapy approaches, and complete a genogram presentation.

Prerequisite(s): 550-110 Theories & Methods of AODA Trt and 550-154 Culturally Skilled Counseling.

550-121 Info Mgmt for Prev & Treatment 2 cr

Lecture and laboratory activities focus on the collection, entry, storage and retrieval of health information. Learners are introduced to the record keeping responsibilities of substance use disorder health care providers including legal mandates (42 CFR Part 2 and HIPAA), agency accreditation requirements, managed care, utilization review and various payment systems, level of care documentation, health care record entries, and grant writing.

Prerequisite(s): 550-102 AODA Counseling/Interviewing and 550-110 Theories & Methods of AODA Trt and (801-197 Technical Reporting.

550-122 Pharmacology-Substance Abuse 3 cr

Knowledge areas covered include basic concepts of pharmacology related to substance use disorder patients; advantages, disadvantages of different dosages; drug entities based on pharmacology-therapeutic classification; street names, generic, and brand names; pharmacology, mechanism of action, pharmacokinetics, use cautions, chronic-acute toxicity, symptoms of withdrawal; drug interactions; dosage, and administration.

Prerequisite(s): 550-102 AODA Counseling/Interviewing and 550-

110 Theories & Methods of AODA Trt and (806-177 Gen Anatomy & Physiology (or taken concurrently) or 806-189 Basic Anatomy (or taken concurrently)).

550-150 Issues-Internship II Seminar 3 cr

A series of eight 6-hour workshops conducted concurrently with Internship Advanced I and Internship Advanced II. Core function development at the internship sites is enhanced through this classroom experience as learners review ethical codes, complete the SAC-IT licensure process, evaluate themselves as counselors-in-training, develop personal learning plans that mimic treatment plan format, process the developmental stages of the internship experience, complete the SAC licensure exam, address sample cases, complete a written case study, and prepare for graduation and employment or further education.

Co-requisite(s): 550-106 Internship Advanced I and 550-107 Internship Advanced II.

550-154 Culturally Skilled Counseling 3 cr

Learners develop an understanding of diversity among people and systems so they can provide substance use disorder counseling services that respond to the differences between and within cultures relative to norms, values, beliefs, communication styles, world views, and political, social, and historical factors. Learners also begin to recognize individual and institutional racism and prejudice, bias in professional training, racial identity development, and cultural competency issues in the substance use disorder counseling profession. Learners engage in self-examination, discussion, class and community activities, and relate these concepts to individualized treatment planning for the substance use disorder patient based on national CLAS standards outlined by the U.S. Office of Minority Health.

Prerequisite(s): 550-108 Substance Use: Risk & Reality and 550-113 Intro to Prev&Trtmt Profession and 550-114 Ethics & Public Policy and 809-198 Intro to Psychology and 550-102 AODA Counseling/Interviewing (or taken concurrently) and 550-110 Theories & Methods of AODA Trt (or taken concurrently).

550-160 Psychiatric Disease and AODA 3 cr

Relying heavily on an understanding of DSM criteria, learners study basic concepts of common mental disorders and therapeutic approaches, medications, and resources to provide holistic health care for patients with substance use disorders and co-occurring mental health problems.

Prerequisite(s): 550-102 AODA Counseling/Interviewing and 550-110 Theories & Methods of AODA Trt and 550-161 AODA and Corrections and 809-188 Developmental Psychology and 550-154 Culturally Skilled Counseling and (806-177 Gen Anatomy & Physiology (or taken concurrently) or 806-189 Basic Anatomy (or taken concurrently)).

550-161 AODA and Corrections 3 cr

An introduction to understanding and treating the substance use disorder patient who is also a criminal justice offender. Learners develop an understanding of how substance use issues impact major areas of the criminal justice offender patient's life. Focus is on understanding how the criminal justice system and the cognitive distortions of criminal thinking affect assessment and treatment planning for the patient.

Prerequisite(s): 550-113 Intro to Prev&Trtmt Profession and 550-114 Ethics & Public Policy and 801-196 Oral/Interpersonal Comm and 809-198 Intro to Psychology and 550-108 Substance Use: Risk & Reality.

550-199 AODA Independent Study 3 cr

Students will be assigned special projects or field experience at an agency or organization in their field of study. Preapproval by instructor is required to register for this class.

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601-Air Cond & Refrig Technology

601-110 Principles of Heat & Air Flow 4 cr

Gas, oil, and electric heating systems are evaluated and tested. Major components and controls of each heating system are detailed. Operation, service and maintenance are performed on a variety of heating systems. Evaluating the proper airflow patterns for a variety of applications is emphasized. The main objective is to assist the technician to work on a variety of heating systems once the course is completed.

Prerequisite(s): 601-141 Electricity-HVAC (or taken concurrently).

601-111 Principles of Refrigeration 2 cr

The purpose of the course is to assist the student in developing and understanding of the basic refrigeration system. Proper use of tools and test equipment for installation and servicing of domestic and commercial refrigeration systems is covered in detail. Soldering, Brazing and flaring of copper tube systems is an essential skill developed in this course. The safe handling of refrigerants along with EPA refrigerant handling certification is a priority.

Prerequisite(s): 601-141 Electricity-HVAC (or taken concurrently) or 401-351 Basic Electricity HVACR.

601-112 Principles of Air Handling 4 cr

The purpose of this course is to inform the student about air and analyzing its properties. The study of fans, fan laws, system balancing, duct layout and sizing is detailed. The students are given the opportunity to work on a variety of air handling systems.

Prerequisite(s): 601-110 Principles of Heat & Air Flow and 601-161 HVAC Load Calc & Psychometric.

601-113 HVAC Systems Design 3 cr

In this course the student designs air conditioning, heating, and ventilation systems for commercial buildings. The building may be an office building, school, hotel, etc. The student performs room by room load calculations, duct layout and pipe sizing, and equipment selection. This course runs concurrently with Drafting HVAC (601-117). The system is designed in accordance with the International Code as modified by the state of Wisconsin

Prerequisite(s): 601-112 Principles of Air Handling and 601-161 HVAC Load Calc & Psychometric. Co-requisite(s): 601-117 Drafting-HVAC.

601-114 Plan & Print Reading 2 cr

In this course the fundamentals of reading and interpreting architectural, plumbing, HVAC, and electrical plans for the sizing and installation of equipment is covered. Working with actual plans of actual buildings the student is able to understand all aspects of basic plan reading. The International Code as modified by the State of Wisconsin is studied by the students giving them the necessary skills for proper system layout and design.

601-115 Renewable Energies for HVAC 1 cr

The purpose of this course is to introduce the student to renewable energy sources and emerging careers in renewable energy. Students will examine geothermal, photovoltaic, solar thermal systems, green building, wind power and others. Basic design, function, cost and other considerations associated with renewable energy sources will be evaluated. Restricted to students admitted to the following program(s): 10-601-1 Air Cond, Heating & Refrg Tech, 31-401-1 Refrig. A/C Htg. Service Tech.

601-116 Principles of Air Conditioning 2 cr

The purpose of this course will help the student understand how air is treated by air conditioning equipment to maintain our health, comfort, and cooling environment. The principles of air conditioning will be covered with a look at various types of air conditioning equipment. Equipment included would be air conditioners, heat pumps (geothermal

and air-to-air) rooftops and other types of related equipment. This course will assist the student in understanding the principles that underlie present day air conditioning equipment, both residential and commercial.

Prerequisite(s): 601-141 Electricity-HVAC (or taken concurrently).

601-117 Drafting-HVAC 2 cr

In this course the student draws the HVAC system for a commercial building using CAD. The building may be an office building, school, hotel, etc. The student creates duct layout and piping drawings, equipment schedules, and details for the HVAC System Design (601-113) class. All equipment is selected by the student, and the system designed in accordance with the International Code as modified by the state of Wisconsin. Prerequisite(s): (601-165 CAD - HVAC or 606-165 CAD - HVAC).

601-118 Sustainability for HVAC 2 cr

The purpose of this course is to answer the question, what is sustainability? The student will explore how sustainability is integrated into HVAC/R systems and building management systems. Improving efficiencies in systems and buildings would be the major goal.

601-119 Hydronic/Geothermal Sys Design 3 cr

This course consists of the design and selection of modern hydronic heating systems and geothermal heat pumps. This course (specifically designed for HVAC/R students) studies the way which different components are connected, which translates in energy efficient operating systems. Detailed coverage of open and closed loop geothermal heat pump systems is covered. Systems analyzed include various heat sources, piping and fittings, circulating pumps, heat emitters, radiant panel heating, distribution piping, expansion tanks, air removal, and auxiliary loads. The student will perform sizing, layout, and design of complete systems.

601-120 Geothermal/Solar Applications 2 cr

This course provides an overview of geothermal and solar applications. Students will be involved in the maintenance, service and performance of these systems. Open and closed loop geothermal heat pump systems are evaluated. The advantages and disadvantages of series and parallel flow configurations are explained. Passive and active solar systems will be reviewed. The declination angle and the effect it has on the sun's radiation during winter and summer is detailed.

601-121 HVAC/R Service & Applications 3 cr

Students learn the techniques to install, test, maintain, and troubleshoot residential and commercial air conditioning and refrigeration systems. Students will have the benefit of learning in a well-equipped lab that provides experience on both residential and commercial air conditioning and refrigeration systems. Equipment such as heat pumps (geothermal and air-to-air), rooftop air conditioners, walk-in freezers and furnaces, boilers, and other HVAV/R types of equipment will be worked on.

601-130 Sheet Metal Layout 1 cr

The student will layout and fabricate a variety of sheet metal fittings. Safe working practices are reviewed and stressed. The proper use of hand tools, shears, benders and other types of sheet metal equipment are detailed and demonstrated. One and two piece duct, reducers, elbows, offsets, plenums, drive cleats, S-locks, and square to round transitions are fabricated and assembled.

601-141 Electricity-HVAC 3 cr

The fundamentals of electricity/electronics with application to air conditioning, heating, and refrigeration will be covered in this course. An introduction to alternating and direct current and the physical laws that apply to electrical circuits are covered. Ohms law and its properties are detailed. The student will acquire an understanding of electrical meters, motors, and controls as used in the HVAC/R industry.

601-142 Schematic Wiring-HVAC 2 cr

Learning to read and interpret electrical schematics found on a variety of HVAC/R equipment is the priority. By referring to an electrical schemat-

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ic the student wires and operates HVAC/R equipment. The course helps in explaining and showing how each electrical component functions in an electrical circuit.

Prerequisite(s): 601-141 Electricity-HVAC.

601-143 Advanced HVAC Controls **3 cr**

The purpose of this course is to review the basic concepts of a HVAC control system. Becoming familiar with the components of a direct digital control (DDC) and pneumatic control system are a priority. The student becomes familiar with analog and binary inputs and outputs. Programming and evaluating control schemes as found on HVAC equipment is the main emphasis.

Prerequisite(s): 601-141 Electricity-HVAC and 601-142 Schematic Wiring-HVAC.

601-151 Technical Problems-HVAC **4 cr**

This course utilized the knowledge gained in previous courses. The student will be asked to diagnose and solve a variety of electrical and mechanical problems found on actual HVAC/R equipment. These problems are also simulated using computer programs, the student completes detailed analysis on rooftops, heat pumps, supermarkets, gas furnaces, oil furnaces, and boilers.

Prerequisite(s): 601-110 Principles of Heat & Air Flow and 601-111 Principles of Refrigeration and 601-141 Electricity-HVAC.

601-161 HVAC Load Calc & Psychrometric **3 cr**

Computer software is used to calculate heat loss and heat gains on residential and commercial buildings. Prerequisite: 854-771 Basic Algebra.

601-165 CAD - HVAC **3 cr**

This course is designed to teach the basic elements of computer-aided drafting using AutoCAD software. The student learns how the system operates, basic entity control, editing functions, dimensioning, plotting, and template setups. The drafting commands are practiced by creating specific HVAC field related drawings. Individual study supported by short lectures and monitored drawing times supervised by instructors.

Prerequisite(s): (601-114 Plan & Print Reading (or taken concurrently) or 607-114 Plan and Print Reading-HVAC).

601-199 Independent Study-Air Cond. **3 cr**

Independent study course; student contracts with instructor, selects topic related to program but not offered as a course or a topic not covered in depth in the program.

602-Automotive Technology

602-153 ASE Test Prep & End Prog Tests **1 cr**

This course will help prepare students to sit for the ASE certification tests in all eight areas. Practice ASE exams will be used to learn test taking strategies and retain automotive technical knowledge. The ASE End of Program Tests will also be taken during this course.

Prerequisite(s): 602-140 Auto Transmission & Transaxles and 602-141 Auto Sfty, Sec & Entertain Sys and 602-142 Manual Drive Train & Axles and 602-143 Adv Engine Perform & Alt Fuels.

602-199 Intro to Automotive Teaching **2 cr**

This course will examine the roles, goals, and objectives of laboratory courses in Automotive Education. Direct laboratory experience in creating, completing, and evaluating hands-on activities. An emphasis will be placed on multiple-student teaching techniques both in the laboratory and classroom setting.

605-Electronic Technology

605-105 DC/AC II **2 cr**

This is a continuation of 605-110. More advanced topics are included

such as RLC, RL, RC circuits, filters, transformers, and complex circuits. Analytical techniques taught include series: parallel analysis, superposition, and Kirchhoff's laws.

Prerequisite(s): 605-110 DC/AC Electronics and 620-193 Electronic Software Applic and 662-100 Engineering Tech Fundamentals and 804-119 Precalculus (or taken concurrently).

605-107 Basic Electronics **3 cr**

DC and AC circuit analysis from an electromechanical perspective. Topics covered include Ohm's Law, Watt's Law, series and parallel circuits, transformers and relays. Emphasis will be placed on troubleshooting and measurement of circuit parameters.

Prerequisite(s): (804-113 College Technical Math 1A (or taken concurrently) or 804-196 College Technical Math 1A (or taken concurrently) or 804-141 Applied Algebra (or taken concurrently)) or (804-115 College Technical Math 1 (or taken concurrently) or 804-195 College Technical Math 1 (or taken concurrently) or 804-151 Technical Math 110 (or taken concurrently)).

605-108 Devices & Digital **3 cr**

Electronic circuits and digital electronics from an electromechanical perspective. Topics covered include electronic switching devices, operational amplifiers, D-A and A-D conversions and basic digital circuits and systems. Emphasis will be placed on installation considerations, compatibility with other devices and troubleshooting.

Prerequisite(s): 605-107 Basic Electronics.

605-109 Industrial Computer Technology **3 cr**

This course examines the personal computer and associated networks as it applies to the industrial environment. Computer architecture, hardware requirements and limitations, and troubleshooting are emphasized, as are the networking requirements to maintain information flow between the production floor and the business administrative functions.

Prerequisite(s): 620-193 Electronic Software Applic.

605-110 DC/AC Electronics **4 cr**

An introductory course that presents the scientific foundation used throughout electronics technology. This course supports the DC/AC state standard for electronics. Troubleshooting practices will be emphasized, and computer technologies will be used to enhance perception of the abstract. Hands-on laboratory exercises and instrumentation will reinforce theoretical concepts. For the Electromechanical student: Concurrent registration in Math 110 or concurrent registration in Math 120 or pass proficiency exam or completed Math 110.

605-110A DC/AC Electronics 1-A **1 cr**

Assuming no previous electronics background, this course uses a Computer-Aided Instruction approach to teach the basics of direct current and circuit analysis. Topics covered include units and notation, current and voltage, resistance and conductance, Ohm's Law, series and parallel circuits. Laboratory experiments supporting the practical application of theory behind each topic will be performed by the student. Emphasis will be placed on troubleshooting techniques and fault isolation. For the Electromechanical student: Concurrent registration in Math 110 or concurrent registration in Math 120 or pass proficiency exam or completed Math 110.

605-110B DC/AC Electronics 1-B **1 cr**

A continuation of 605-110A. This course uses a Computer-Aided Instruction approach to teach advanced direct current concepts and alternating current fundamentals. Topics covered include series-parallel circuits, voltage dividers, Kirchoff's Laws, introduction to AC, and AC test equipment. Laboratory experiments supporting the practical application of theory behind each topic will be performed by the student. Emphasis will be placed on troubleshooting techniques and fault isolation.

Prerequisite(s): 605-110A DC/AC Electronics 1-A.

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605-110C DC/AC Electronics 1-C **1 cr**

A continuation of 605-110B. This course uses a Computer-Aided Instruction approach to teach basic AC circuit concepts. Topics covered include inductors, RL series and parallel circuits, capacitors, RC series and parallel circuits. Laboratory experiments supporting the practical application of theory behind each topic will be performed by the student. Emphasis will be placed on troubleshooting techniques and fault isolation.

Prerequisite(s): 605-110B DC/AC Electronics 1-B.

605-110D DC/AC Electronics 1-D **1 cr**

A continuation of 605-110C. This course uses a Computer-Aided Instruction approach to teach advanced AC circuit concepts. Topics covered include RL and RC filters, RC time constants, LCR series and parallel circuits, series and parallel resonance, transformers, and relays. Laboratory experiments supporting the practical application of theory behind each topic will be performed by the student. Emphasis will be placed on troubleshooting techniques and fault isolation.

Prerequisite(s): 605-110C DC/AC Electronics 1-C.

605-117 Microprocessors Prgm/Interfcg **4 cr**

This course introduces students to programming and design of microcontrollers-based systems. The first part of this course deals with programming the microcontrollers using assembly language programming. PC tools will be used in development of software. The second part of the course deals with interfacing the microcontrollers to the outside world. Lecture and lab both will assist in utilization of Serial, parallel communications, interrupts, and analog signals.

Prerequisite(s): 605-120 Devices/Circuits I and 605-135 Digital Princ Using FPGA Cirt.

605-119 Electronic Circuits II **3 cr**

This course is a continuation of Electronic Circuits I. This course stresses the analysis of electrical circuits, including field effect transistors and cascaded amplifiers. The frequency response and impedance of these circuits is explored. The differential amplifiers and operational amplifiers are also explored. The computer is used as a tool to analyze these circuits. Lab work is used to verify theoretical concepts presented in lecture.

Prerequisite(s): 605-105 DC/AC II and 605-120 Devices/Circuits I.

605-120 Devices/Circuits I **4 cr**

This course uses a computer-aided instruction approach to teach an introduction to semiconductor theory including diodes, power supplies, bipolar transistors, small signal transistor amplifiers, operational amplifiers, filters, switching power supplies, and transistor oscillators. Laboratory experiments supporting the practical application of the theory behind each topic being studied will be performed by the student.

Prerequisite(s): 605-110 DC/AC Electronics and 804-119 Precalculus (or taken concurrently).

605-123 Computer Hardware **4 cr**

This course addresses the fundamentals of personal computer(PC) workstations hardware systems and the integration of operating systems used by business and industry into those systems. Course topics include: integration, configuration, troubleshooting, and documentation of PC subsystems including motherboard architecture, form factors, power supplies, IDE devices and removable storage, system memory, multimedia devices, I/O devices, BIOS and boot process, and video/display fundamentals. Additionally, the integration, configuration, troubleshooting, and documentation of commonly used (current and legacy) operating systems, as they relate to system hardware, is explored.

Prerequisite(s): 150-123 IT Networking Concepts and (605-102 Electronic Concepts or 605-135 Digital Princ Using FPGA Cirt).

605-128 A+ Review & Advanced Hardware **3 cr**

This course provides the learner with an in-depth knowledge and

competency in core computer hardware and operating system technologies including installation, configuration, diagnostics, and preventive maintenance. Advanced configuration and computer support issues such as power conditioning, grounding, system backup, RAID, serial ATA, image deployment, and printer/copier maintenance will be investigated.

At course completion, students will have acquired the competencies to sit for the A+ certification exams. Course fee includes the cost for a single attempt of the CompTIA A+ Essentials and 220-602, -603, -604 certification exams.

Prerequisite(s): 605-123 Computer Hardware or 605-109 Industrial Computer Technology.

605-134 Network Infrastructure Cncpts **2 cr**

This course provides students an overview of the fundamentals of the infrastructure elements that support computer networks and devices. Learners will study the basics of network cable installation and termination, meter usage, direct current (DC) circuits, alternating current (AC) circuits, AC wiring, uninterruptible power supply (UPS) selection, power conditioning, power management, power over Ethernet (POE), and digital logic. The course will be delivered via a combination of reading and homework assignments, lecture/discussion sessions, and hands-on laboratory exercises. Emphasis will be placed on safety and compliance with industry standards.

Restricted to students admitted to the following program(s): 10-150-2 IT-Network Specialist.

605-135 Digital Princ Using FPGA Cirt **3 cr**

This is the basic study of logical systems, built upon an understanding of number systems (hexadecimal, decimal, octal, binary), logic elements (and, or, not, exclusive or), logic design languages, and design tools. Students will progress through a series of ever increasing complexity designs and acquire a mastery and understanding of logic and digital principles.

Prerequisite(s): 605-110 DC/AC Electronics.

605-152 Real Time Data Acquisition **2 cr**

This course will focus on industrial application of acquiring data from PLC based equipment using industrial and Ethernet networks. Display of data will use industrial display terminals such as the Allen-Bradley Panel View and Microsoft Excel spreadsheet using DDE technology. Prerequisite: Experience in MS Windows and Excel required.

Prerequisite(s): 620-136 PLC Applications.

605-171 Exploring Electromechanical **1 cr**

Geared for high school juniors and seniors who are interested in exploring the careers of electrical engineering technician, electromechanical technician, robotics automation, and programming technology. We'll design a real working Boe-bot. Learn about all the ways to program, maneuver, and navigate your very own robot. You'll learn about infrared sensing, object determination, and light-sensing navigation. In the process you'll be learning all about simple industrial control processes that manufacture the products we use every day. Try your hand at the automated pencil-sharpener or the robotic brochure dispenser. In addition, take tours of industry and learn all about the exciting career world of design, automation, robotics, and problem-solving technology. You'll hear great career information and have fun at the same time.

605-179 ASIC/FPGA Applic in Verilog **4 cr**

This course starts with the study of the Verilog logic design language. With this knowledge, the student makes a small logic design and moves the design through the design process for an ASIC (application specific integrated circuit), concluding with JTAG (Joint Test Action Group) and BIST (Built In Self Test) insertion, and testing and verification. The study will center around common logic modules, sequential and state machines. The design will be implemented in an Xilinx FPGA.

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Prerequisite(s): 605-117 Microprocessors Prgm/Interfcg.

605-182 Electronic Communic Principles 3 cr

This is the study of basic methods of electronic communication. Communication methods included are the traditional AM and FM as well as digital signal communications methods. Some methods of digital communications are PLL and frequency and time division multiplexing. The concept of noise and its effect is studied.

Prerequisite(s): 605-119 Electronic Circuits II.

607-Civil Engineering Technology

607-100 Draft. Fund./Wood Frame Const. 3 cr

This course is designed to introduce basic drafting standards. The first part of the course is devoted to developing acceptable drafting techniques and line standards along with the study of two dimensional and three dimensional concepts. Emphasis is placed on developing visual and sketching techniques. Attention is then directed to the application of these drafting standards to trade related problems. In this section of the course, the student will design and draw a complete set of working drawings for a residence in accordance with industry standards. A study of the various drafting standards will be incorporated as the subject matter dictates. The general emphasis in this course will be to merge theory and trade practice. Meet COMPASS math test cutoff score. Prerequisite: High School Algebra or 854-771 Basic Algebra.

Restricted to students admitted to the following program(s): 10-607-5 Civil Engineering Tech-Struc.

607-111 Architectural Drafting I 3 cr

This course provides instruction in commercial architectural drafting. Emphasis is placed on drafting techniques; lettering; and drafting of details, plans, elevations, and sections. The student develops a set of architectural plans for a small commercial building. Studies of building code requirements, utility applications, and selection of construction materials are made in development of the plans.

Prerequisite(s): 607-100 Draft. Fund./Wood Frame Const. and 607-140 Structural Analysis and 607-125 Mechanical Systems or (607-164 CAD Civil or 606-161 CAD, Basic or 606-161C Basic CAD, Level III). Co-requisite(s): 607-117 Architectural CAD.

607-112 Drafting HVAC 2 cr

In this course, the student draws the HVAC system for a two-story commercial building of his or her choice. The building may be an office building, school, hotel, etc. The student creates duct layout and piping drawings, equipment schedules, and details for the HVAC system that he or she designs in HVAC Systems Design class. All equipment is selected by the student, and the system is designed in accordance with the International Code as modified by the state of Wisconsin.

Prerequisite(s): 606-165 CAD - HVAC and 607-114 Plan and Print Reading-HVAC. Co-requisite(s): 601-113 HVAC Systems Desig.

607-113 Architectural Drafting II 3 cr

The classroom simulates a natural architectural drafting room. A design is developed by the student and then the student prepares presentation drawings. After the presentation drawing phase, the student will develop these ideas into working drawings. These drawings will include floor plans, schedules, wall sections, and details. The student will also learn the fundamentals of drawing additions and remodeling and specification writing.

Prerequisite(s): 607-111 Architectural Drafting I and 607-123 Construction Steel and 607-124 Construction Concrete and 607-140 Structural Analysis.

607-114 Plan and Print Reading-HVAC 2 cr

The fundamentals of reading architectural drawings and learning the

Wisconsin Administrative Code. Prerequisite: 854-771 Basic Algebra, high school algebra or equivalent.

607-117 Architectural CAD 3 cr

The mission of this course is to provide the student with an opportunity to explore enhancements which can be added to AutoCAD. The student will develop additional AutoCAD skills, develop problem-solving strategies, increase his/her efficiency, and cope with change in his/her software environment. The student will use this program for creating plan views, sections, elevations, and details.

Prerequisite(s): 607-100 Draft. Fund./Wood Frame Const. and (606-161 CAD, Basic or 607-164 CAD Civil or 606-161C Basic CAD, Level III).

Co-requisite(s): 607-111 Architectural Drafting I.

607-123 Construction Steel 3 cr

This course covers the selection and design of structural steel materials that might be used in the construction of a commercial or industrial building. Special emphasis is placed upon using the AISC Manual of Steel Construction 13th Edition and the Steel Joist Institute's latest Standard Specifications Load Tables and Weight Tables for Steel Joists and Joist Girders in learning to design and select steel beams, columns, joists, base plates, bearing plates, and lintels used in commercial and industrial roof and floor systems. The student will also learn the proper methods used to create the structural design drawings.

Prerequisite(s): 607-100 Draft. Fund./Wood Frame Const. and 607-140 Structural Analysis and 607-125 Mechanical Systems and (606-161 CAD, Basic or 606-161C Basic CAD, Level III or 607-164 CAD Civil).

607-124 Construction Concrete 2 cr

This course familiarizes the student with concrete construction. The student calculates size and draws details of concrete footings, foundation walls, floor and roof systems, and stairways. Concrete cylinders are tested and analyzed in the laboratory.

Prerequisite(s): 607-100 Draft. Fund./Wood Frame Const. and (606-161 CAD, Basic or 606-161C Basic CAD, Level III or 607-164 CAD Civil).

607-125 Mechanical Systems 3 cr

This course consists of the selection and installation of mechanical equipment necessary to fulfill the total design requirements of modern civil-structural technology. This course will study the various means by which these requirements are translated into operating systems of interconnected hardware. Systems analyzed will include various commercial plumbing systems (sanitary drainage, storm drainage, and fire protection systems) and HVAC (heating, ventilating, and air conditioning) systems. Prior to studying these systems, basic introductory information on such topics as the structural-mechanical relationship, physical considerations for mechanical systems, plumbing codes, plumbing specifications, plumbing fixtures, plumbing materials, and pipe drafting symbols will be studied. Students will produce mechanical systems plans, sometimes with accompanying schematic drawings, during each unit of instruction. These mechanical systems plans will relate to a small commercial office building. Meet COMPASS math test cutoff score. Prerequisite: High School Algebra or 854-771 Basic Algebra.

Prerequisite(s): 607-100 Draft. Fund./Wood Frame Const. (or taken concurrently) and 607-164 CAD Civil (or taken concurrently). Restricted to students admitted to the following program(s): 10-607-5 Civil Engineering Tech-Struc.

607-130 Fundamentals of Surveying 2 cr

Principles and practices of land surveying.

Prerequisite(s): 804-106 Intro to College Math.

607-140 Structural Analysis 4 cr

This course introduces the first-year Civil-Structural student to the basic principles of structural mechanics and design, with special emphasis placed upon application of these principles in the design and construction

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of commercial buildings. Detailed solutions to a number of problems in basic structural engineering are presented. Mastery of the material presented in this course is critical to the successful completion of subsequent design courses in the Civil Engineering Technician-Structural program.

Restricted to students admitted to the following program(s): 10-607-5 Civil Engineering Tech-Struc.

607-148 Structural Drafting I **4 cr**

In this course, the student gains a basic understanding of structural steel sections, terms, abbreviations, and symbols used by structural steel fabricators and by structural steel erectors. The student makes steel erection plans, anchor rod plans, and detailed shop fabrication drawings of structural steel beams and columns. Special emphasis is placed on the design of bolted and welded structural steel connections. The student becomes familiar with Detailing for Steel Construction and the Manual of Steel Construction-Allowable Stress Design-13th Edition, which are both published by the American Institute of Steel Construction. The student then learns how to solve typical design problems related to steel framing and steel construction using these design manuals.

Prerequisite(s): 607-111 Architectural Drafting I and 607-123 Construction Steel and 607-124 Construction Concrete and 804-116 College Technical Math 2.

607-149 Structural Drafting II **2 cr**

This course is a continuation of Structural Drafting I. In the first part of this course, the student learns how to detail structural support frames and bracing using structural steel. In the second part of this course, the student learns how to detail skewed beams, which are very common in nonrectangular framing.

Prerequisite(s): 607-148 Structural Drafting I.

607-151 Tech Problems-Civil Structural **3 cr**

In this course, the student continues to design a commercial building project which is started in Architectural Drafting II. This course utilizes the knowledge gained in previous courses. He/she prepares a complete set of working drawings necessary to construct a commercial or industrial building, including the architectural plans and details and structural plans and details. This project also includes all required design calculations. The structural design calculations are typical of those that arise daily in actual design office practice.

Prerequisite(s): 607-113 Architectural Drafting II and 607-148 Structural Drafting I and 607-152 Construction Methods and 607-155 Soil Mechanics Surveying.

607-152 Construction Methods **2 cr**

This course coordinates information and understanding developed in Construction Concrete and Structural Analysis and expands previous learning into a systematic study of applied design procedures for commercial construction projects using reinforced concrete for their structural support. The content of this course and the presentation of the material are geared toward the development of an orderly and systematic procedure of solving applied reinforced concrete design problems and the ability to use good judgment and practical considerations in the choice, design, and erection of reinforced structures.

Prerequisite(s): 607-140 Structural Analysis and 607-111 Architectural Drafting I and 607-124 Construction Concrete.

607-155 Soil Mechanics Surveying **4 cr**

An elementary course in surveying, including the fundamentals of plane surveying and care of equipment. The course includes theory and field problems in distance measuring, leveling, measuring vertical and horizontal angles, topographical surveying, and construction location surveying. Land descriptions used in the United States are studied. The last unit of study is devoted to soil mechanics.

Prerequisite(s): 607-111 Architectural Drafting I and 804-116 College Technical Math 2.

607-160 Advanced Structural CAD **3 cr**

In this course, the student learns how to detail miscellaneous structural steel and how to use AutoSD and SDS/2 steel detailing software, two of the more advanced CAD drafting systems used by structural steel detailers in the industry today. The fourth semester student first learns how to detail miscellaneous structural steel by detailing the remaining items from his or her Structural Drafting I project, which makes that project complete to industry standards. Then the student uses the AutoSD steel detailing software to complete a variety of detailed shop drawings for structural steel beams, columns, and miscellaneous steel. Next he or she advances into producing steel erection and anchor rod plans using the AutoSD software. The student then goes through basic training on the SDS/2 steel detailing software, and once this training is complete he or she uses the SDS/2 software to produce structural steel detail and erection drawings for all the structural steel items in his or her technical problems project.

Prerequisite(s): 607-140 Structural Analysis and 607-148 Structural Drafting I.

607-164 CAD Civil **3 cr**

This course is designed to teach individuals interested in learning the fundamentals of computer-aided drafting using AutoCAD software. The student learns how the system operates, basic entity creation, modifying operations, text styles, dimensioning, blocks, plotting, etc. At the conclusion of the course, the student should have developed basic skills relating to computer-aided drafting and should be able to use CAD on advanced projects in future classes. Prerequisite: Two credits of high school drafting fundamentals or equivalent.

Restricted to students admitted to the following program(s): 10-607-5 Civil Engineering Tech-Struc.

607-180 Intro to Revit Architecture **2 cr**

The student will learn the fundamentals of the Revit Architectural modeling software. The student will use this software to develop a building model and then create plans, sections, elevations and details from the model.

612-Fluid Power Technology

612-101 Related Fluid Power **2 cr**

Overview of basic components, applications, and circuitry involved in hydraulics and pneumatics. Lecture and lab experiences involving pumps, valves, cylinders, fluids, and conditioners; basic theory and circuitry.

620-Electromechanical Technology

620-101 Automated Processes **2 cr**

Electromechanical systems and processes used in modern manufacturing facilities. An overview of the manufacturing environment and the role of the electromechanical technician in that environment.

620-125 Industrial Power Theory & Appl **3 cr**

This course covers AC and DC motors, alternators and generators, transformers, PLCs and motor controllers, and other industrial control circuits. Analysis includes phasor algebra to solve three-phase problems. Prerequisite(s): 605-105 DC/AC II and 620-155 Industrial Electronics I.

620-130 Industrial Elec Concepts **3 cr**

This course introduces the student to basics of electricity needed by the industrial mechanic. Included are basic electrical theory, operation and use of the Volt-Ohm meter, AC and DC electric motors, motor controls and wiring, and applications as needed to install, operate, and control industrial machines. Through classroom and laboratory activities, students

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can develop a practical understanding of electrical components, control, and operation.

Restricted to students admitted to the following program(s): 31-462-2 Industrial Mechanic.

620-135 PLC Introduction **2 cr**

Principles of programmable logic controllers (PLCs) including programming the PLCs, creating basic ladder logic circuits containing basic logic functions, timers, counters, and sequencers. Emphasis is on basic PLC functions to assist one in servicing and troubleshooting PLC controlled equipment. The Allen Bradley PLC 5/03 and Micrologix family of PLCs are used. May get instructor approval instead of taking prerequisite(s).

Prerequisite(s): (620-155 Industrial Electronics I and 620-193 Electronic Software Applic) or (620-130 Industrial Elec Concepts or 414-343 Industrial Electricity Concept).

620-136 PLC Applications **3 cr**

Design and add documentation to ladder logic programs to solve application problems. PLC applications examples as used in industry will be programmed on real industry equipment utilizing a wide variety of various sensors, photoelectric, proximity, motor drives, and control devices creating working automated systems.

Prerequisite(s): (620-135 PLC Introduction and 620-156 Industrial Electronics II) or (620-130 Industrial Elec Concepts or 414-343 Industrial Electricity Concept and 620-135 PLC Introduction).

620-137 Introduction to Controllogix **1 cr**

This course is designed to introduce the student to the Allen-Bradley Controllogix system. Topics covered include discrete and analog modules, communications, tags/addressing, basic data structures, and basic task structures. The 1756 platform will be used for hands-on activities in this course. Students should complete a preassessment at <http://plc.cvtelectronics.edu> to determine if they are ready for this course.

620-138 Intermediate Controllogix **1 cr**

This course is designed to enhance a student's skills with the Allen-Bradley Controllogix system. Topics covered include labor logic programming, basic function block programming, basic structured text programming, produced/consumed tags, user data structures, and motion control programming basics. The 1756 platform will be used for hands-on activities in this course.

Prerequisite(s): 620-137 Introduction to Controllogix.

620-144 Applied EM Machine Principles **2 cr**

Basics of power transmission equipment operation, maintenance, and repair as applied to industrial machines, robots, and manufacturing line systems.

620-145 Industrial Robotics Systems **2 cr**

Terminology, concepts, and components of robots, robot-type machines, and automation. Emphasis will be on interfacing automated machinery.

Prerequisite(s): 620-156 Industrial Electronics II.

620-146 Machine Troubleshooting Tech **2 cr**

Hands-on troubleshooting of PLC, CNC, robotic, and automated control systems. Yields experience in finding failures in electrical, pneumatic, power, and computer concepts.

Prerequisite(s): 612-101 Related Fluid Power and 620-136 PLC Applications and 620-144 Applied EM Machine Principles and 620-145 Industrial Robotics Systems.

620-147 Control Applications **2 cr**

Hands-on in building an automated process controlled by a PLC computer system. Interfacing sensors to detect product types and interfacing motors and solenoids, to control motion. Gives real world interface and wiring situations. Prerequisite(s): 612-101 Related Fluid Power and 620-136 PLC Applications and 620-144 Applied EM Machine Principles and 620-145 Industrial Robotics Systems.

620-148 EM System Interfacing **4 cr**

Hands-on interfacing of PLC's, operator interfaces, sensors, and various automated equipment to create a work cell level of automation. Gain experience in programming, wiring, and configuration. Learn the troubleshooting and programming of a more complex process.

Prerequisite(s): 612-101 Related Fluid Power and 620-136 PLC Applications and 620-144 Applied EM Machine Principles and 620-145 Industrial Robotics Systems and (420-190 Machine Tool Processes or 620-190 Machine Tool Processes) and 620-146 Machine Troubleshooting Tech (or taken concurrently) and 620-147 Control Applications (or taken concurrently).

620-150 Instrumentation **2 cr**

The student will learn how to measure the properties of temperature, pressure, flow, and level. Tuning PID loops and troubleshooting instrumentation systems. Transducers and control systems will be taught from a systems approach. Full-size industrial standard components and systems are used.

Prerequisite(s): 620-156 Industrial Electronics II and 620-193 Electronic Software Applic.

620-155 Industrial Electronics I **2 cr**

Concepts of basic industrial control electronics. Fundamentals of ladder logic and control wiring. Reading and interpreting ladder logic, wiring diagrams, and one-line diagrams used in industry. Using Actrix Technical by Auto Desk to create ladder logic for applications. The importance of using wire numbers and wire color codes in accordance with NFPA 79 (National Fire Protection Association) standards. The students will work with and gain knowledge of the following components: transformers, power supplies, fuses, disconnect switches, circuit breakers, relays, solenoids, pressure switches, limit switches, timers, latching relays, push buttons, and selector switches.

620-156 Industrial Electronics II **2 cr**

In-depth concepts of industrial control and power circuits. Counters, temperature controllers, forward and reversing motor starters, contactors and frequency drives. 3-phase AC motors, single-phase, split-phase AC motors, and DC motors. Mounting and wiring of PLCs, designing control systems for easy maintenance, industrial data communication, and quality control. Design, wire, and document control and power circuits to solve application problems.

Prerequisite(s): 605-107 Basic Electronics and 620-155 Industrial Electronics I and 620-193 Electronic Software Applic.

620-158 Sensors & Servo Systems **2 cr**

Theory and application of various types of sensors and Servo/PID control systems. Application, wiring, and configuration of non-contact sensors within automated systems are covered. Theory of servo loops and PID (Proportional, Integral, Derivative) control systems using analog sensors is studied.

Prerequisite(s): 620-156 Industrial Electronics II (or taken concurrently).

620-191 Motion Control Applications **3 cr**

The studies the fundamentals of stepper motors including; testing, operation, drivers, indexers, and computer control of motion for use in applications to control X Y motion such as lathes, and X Y Z motion such as control of milling machines. The studies the fundamentals of servo control including; testing motors, optical encoders, servo drivers, and computer control of motion for use in applications to control X Y motion such as lathes, and X Y Z motion such as control milling machines.

Prerequisite(s): 605-108 Devices & Digital and 620-156 Industrial Electronics II.

620-193 Electronic Software Applic **2 cr**

Consists of an introduction to computer software applications used in the Electronics programs. Topics include an introduction to the following

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software: MultiSim circuit simulation, MS-Office, and basic DOS/Unix commands to support using simulation software.

620-199 Ind Study-Electromechanical 3 cr

Student may elect to study specific applications in robotics, programming, vision systematic.

635-Nanotechnology

635-100 Fundamentals of Nanoscience I 3 cr

This course will provide an introduction to the history, tools, materials, and current and emerging applications of Nanotechnology. This will include the study of electron microscopes, scanning probe microscopes and nanomaterials such as carbon nanotubes. The application of Nanotechnology to fields such as electronics, advanced materials, energy, biology, and agriculture will be studied.

Prerequisite(s): 806-134 General Chemistry (or taken concurrently). Restricted to students admitted to the following program(s): 10-635-1 Nanoscience Technology.

635-101 Intro to Microfabrication 3 cr

The multibillion dollar semiconductor manufacturing industry has revolutionized the world with home computers, cell phones and portable music players. In this hands-on class you will learn how it functions. You will start out learning how pure silicon wafers are made, then progress to the different processes used to put patterns on the wafers, and finally how the wafers are made into computer chips. The basic patterning processes covered are photolithography, etching, and deposition. Also, in this class you will practice what you are learning about semiconductor manufacturing in CVTC's class 100 cleanroom by creating wafers with your own patterns on them. This course also covers the operating principles of electronic devices such as resistors and transistors.

635-103 Nanoelectronics 3 cr

This course will cover the state-of-the-art processes currently used for the fabrication of microelectronic and nanoelectronic devices. Students will demonstrate the function of various transistors and how they operate in a circuit to form logic gates. Properties of semiconductor materials will be explored. Students will learn to qualify and use semiconductor process equipment, inspect devices using atomic force and scanning electron microscopes and perform electrical measurements on semiconductor devices. Use of clean room chemicals for processing semiconductor materials will be considered.

Prerequisite(s): 635-101 Intro to Microfabrication. Restricted to students admitted to the following program(s): 10-635-1 Nanoscience Technology.

635-104 Nano Cell Biology 2 3 cr

In this course we will study the use of nanotechnology as it applies to biological and agricultural applications. Some examples include biochips used for detecting and identifying DNA and proteins, medical uses of nanotechnology for drug delivery and medical imaging, mimicking biological systems to develop catalysts, nanoscale movement and information systems. We will study nanotechnology for agricultural applications such as ethanol production, sorbitol based fuel cells, genetics, and uses of cellulose.

Prerequisite(s): 635-118 Nano Cell Biology 1.

635-105 Nanomaterials 3 cr

Materials based on nanoparticles are already in the marketplace. This course will discuss the opportunity and challenge of nanomaterial based products from pharmaceutical coatings to smog reducing paints to individual crystal structure determination. Manufacturing processes along with reliability and quality control aspects will be discussed.

Prerequisite(s): 635-101 Intro to Microfabrication and 635-103 Nanoelectronics. Co-requisite(s): 635-117 Nanoscience Manufacturing & QA.

635-108 Micro and Nano Fabrication 2 cr

Students will learn atomic structure and the periodic table, particularly as related to semiconductors; the meaning of semiconductor materials, their functions and use; differences between single crystal and polycrystalline materials; operations of diffusion and thin film deposition and how photolithography and masking work in the semiconductor process; oxidation process; etching, including wet and dry etching and photoresist stripping; doping, including diffusion techniques and ion implantation; thin film deposition, including CVD, LPCVD and metallization methods; wafer terminology, testing, evaluation, and yield factors.

Prerequisite(s): 635-103 Nanoelectronics. Co-requisite(s): 635-112 Micro & Nano Fabrication Lab.

635-109 Princ & Applic Nanobiotechnlgy 2 cr

The course will focus on science and engineering miniaturization technologies applied to discrete and multiplexed biochemical analysis. After describing several large opportunity goals and objectives in modern genomics, proteomics, biomarker discovery, drug discovery, biowarfare agent detection, and systems biology, this course will survey several core engineering approaches used in meeting the needs of multiplexed bioanalysis, like MEMS, nanofabrication, nanostructures and materials, biosensors, microfluidics and lab-on-a-chip biochemical processors, microarrays, cellular manipulation tools, and portable analysis instruments. Co-requisite(s): 635-104 Nano Cell Biology 2 and 635-105 Nanomaterials.

635-111 Intro to Materials Characteriz 3 cr

Students will receive hands-on experience with the characterization of engineering materials. Familiarity will be gained with the electron/optical microscopy, atomic force microscopy, x-ray diffraction, and spectroscopic methods. Students will perform specimen preparation; data collection/analysis and complete lab notes.

Prerequisite(s): 635-103 Nanoelectronics and 635-104 Nano Cell Biology 2 and 635-105 Nanomaterials. Co-requisite(s): 635-113 Materials Characterization Lab.

635-112 Micro & Nano Fabrication Lab 2 cr

This lab covers the basic process steps to make top-down micro and nano scaled structures. Specific topics include oxidation, photolithography, electron beam lithography, chemical vapor deposition, etching, rapid thermal annealing, wet chemical etching, and plasma etching. Students will build a micro mechanical structure as part of the lab.

Prerequisite(s): 635-103 Nanoelectronics. Co-requisite(s): 635-108 Micro and Nano Fabricatio.

635-113 Materials Characterization Lab 1 cr

The lab will cover the characterization of engineering materials by electron/optical microscopy, atomic force microscopy, x-ray diffraction, and spectroscopic methods; specimen preparation; data collection/analysis; and lab note taking.

Prerequisite(s): 635-103 Nanoelectronics and 635-104 Nano Cell Biology 2 and 635-105 Nanomaterials. Co-requisite(s): 635-111 Intro to Materials Characteriz.

635-114 Biochips Lab 2 cr

This lab will cover particle formation and size measurement; aerosol sampling; optical and condensation counters; and fabrication and testing of an electrophoresis biochip.

Prerequisite(s): 635-103 Nanoelectronics. Co-requisite(s): 635-104 Nano Cell Biology 2 and 635-105 Nanomaterials and 635-109 Princ & Applic Nanobiotechnlgy.

635-115 Nano Industry Practicum 1 cr

Students will participate in a work experience where s/he will have an opportunity to practice acquired skills and knowledge from their program coursework. Individuals will be able to further reinforce their

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career, academic, skill, and personal competencies.

Prerequisite(s): 635-117 Nanoscience Manufacturing & QA. Restricted to students admitted to the following program(s): 10-635-1 Nanoscience Technology.

635-117 Nanoscience Manufacturing & QA 3 cr

This course will present an overview of quality methods as they relate to nanotechnology. Emphasis will be on statistical process control (SPC), design of experiments (DOE), gage repeatability and reliability (R & R), statistical significance, correlation, team-based problem solving, failure mode analysis, theory of inventive thinking (TRIZ), graphical statistical analysis, analysis of variance (ANOVA), and an introduction to ISO certification. A strong statistics background is required.

Prerequisite(s): 804-189 Introductory Statistics. Co-requisite(s): 635-104 Nano Cell Biology 2 and 635-105 Nanomaterials.

635-118 Nano Cell Biology 1 3 cr

This class examines the structure and function of the cell at the nanoscale. Topics include catalysis and biosynthesis, protein structure and function, genomics, gene manipulation, cell membrane structure and transport, cell communication, motor proteins and cancer. Emphasis will be on how cellular processes relate to bioMEMS, lab on a chip, sensors, diagnostics and biomedical devices.

Prerequisite(s): 635-100 Fundamentals of Nanoscience. Restricted to students admitted to the following program(s): 10-635-1 Nanoscience Technology.

635-119 MEMS and Microfluidics 3 cr

Micro-Electro-Mechanical Systems (MEMS) are microscopic moving devices manufactured using computer chip fabrication methods. They have a wide variety of applications including in air bag collision sensors, digital projectors, optical communications, chemical sensors. Students will continue their experience in microfabrication and microelectronics manufacturing to design and manufacture MEMS in the cleanroom.

Prerequisite(s): 635-108 Micro and Nano Fabrication and 635-112 Micro & Nano Fabrication Lab. Co-requisite(s): 635-121 MEMS & Microfluidics Desig. Restricted to students admitted to the following program(s): 10-635-1 Nanoscience Technology.

635-120 Nano & Micro Fab-Ind Study 1 cr

Prerequisite(s): 635-103 Nanoelectronics.

635-121 MEMS & Microfluidics Design 2 cr

This course allows students to use principles of computer aided design to design micro electro mechanical systems and microfluidic devices. Students will make use of Sandia National Laboratories SUMMIT V MEMS design software. Material considerations for microfabricated devices will be included. Prerequisite(s): 606-161 CAD, Basic and 635-119 MEMS and Microfluidics (or taken concurrently).

801-Communication Skills

801-136 English Composition 1 3 cr

This course is designed for learners to develop knowledge and skills in all aspects of the writing process. Planning, organizing, writing, editing, and revising are applied through a variety of activities. Students will analyze audience and purpose, use elements of research and format documents using standard guidelines. Individuals will develop critical reading skills through analysis of various written documents.

Prerequisite(s): (COMPASS-Writing 46 or ACT English Assessment 17) or (831-103 Intro to College Writing or 801-120 Beginning Composition) or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y). Restricted to students admitted to the following program(s): 10-110-1 Paralegal.

801-171 Business English 3 cr

Develops proficiency in applying the various principles of English to language structure, usage, and style as used in employment situations.

Prerequisite(s): (COMPASS-Writing 46 or ACT English Assessment 17) or (831-103 Intro to College Writing or 801-120 Beginning Composition) or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y).

801-175 Job-Search Communications 1 cr

Develops the skills necessary for an effective search. Specific areas to be addressed in the course will include resumes, job-search letters, application forms, a professional job portfolio, and employment interviews.

801-195 Written Communications 3 cr

Develops writing skills which include prewriting, drafting, revising, and editing. A variety of writing assignments are designed to help the learner analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. It also develops critical reading and thinking skills through the analysis of a variety of written documents.

Prerequisite(s): (COMPASS-Writing 46 or ACT English Assessment 17) or (831-103 Intro to College Writing or 801-120 Beginning Composition) or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y)

801-196 Oral/Interpersonal Comm 3 cr

Focuses upon developing speaking, verbal and nonverbal communication, and listening skills through individual presentations, group activities, and other projects.

801-197 Technical Reporting 3 cr

Prepares and presents oral and written technical reports. Types of reports may include lab and field reports, proposals, technical letters and memos, technical research reports, and case studies. Designed as an advanced communication course for students who have completed at least the prerequisite introductory writing course with a grade of "C".

Prerequisite(s): 801-195 Written Communications.

801-198 Speech 3 cr

Explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course.

801-200 Humanities 9 cr

Course credits taken at another accredited technical college, university or community college will be reviewed for transfer to fulfill the humanities requirements for the Liberal Arts degree at CVTC. The following is a list of course categories that would apply; history, literature, geography, philosophy, religious studies, anthropology, art history, music appreciation, and performing arts.

801-299 Electives for Univ Transfer 6 cr

Courses completed at the 200 level with a D grade or better from an accredited technical college, community college or university will be considered for the purposes of fulfilling the 6 credits needed for the Liberal Arts Associate degree at CVTC.

801-351 Applied Communications 2 cr

Develops skills in the four areas of communication--reading, writing, speaking, and listening--emphasizing practical application of the skills for the workplace environment.

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802-Foreign Language

802-102 Spanish for the Green Industry 2 cr

Introduces basic conversation skills in Spanish to those working in the Green Industry. Emphasizes the use of vocabulary and expressions needed for communication in horticulture, landscaping, nursery/greenhouse and turf management. Addresses cultural aspects of working with Spanish speaking populations.

802-200 Foreign Language 4 cr

Course credits taken at another accredited technical college, university or community college will be reviewed for transfer to fulfill the foreign language requirement for the Liberal Arts degree at CVTC. The following is a list of languages that would apply; Spanish, French; German; Russian; Hmong; Japanese; Chinese, etc.

804-Mathematics

804-100 Math for Health Sciences 2 cr

This course provides a review and expansion of the basic math skills used by individuals preparing to pursue a medical career. It includes a review of operations and applications using integers, fractions, decimals, percents, ratios and proportions, measurements, scientific notation and solving linear equations. The last units of study vary depending on the student's major program. Topics include graphing and statistics, dosage calculations, logarithms and geometry.

804-107 College Mathematics 3 cr

This course is designed to review and develop fundamental concepts of mathematics pertinent to the areas of: 1) arithmetic and algebra; 2) geometry and trigonometry; and 3) probability and statistics. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections, and using calculators. Topics include performing arithmetic operations and simplifying algebraic expressions, solving linear equations and inequalities in one variable, solving proportions and incorporating percent applications, manipulating formulas, solving and graphing systems of linear equations and inequalities in two variables, finding areas and volumes of geometric figures, applying similar and congruent triangles, converting measurements within and between U.S. and metric systems, applying Pythagorean Theorem, solving right and oblique triangles, calculating probabilities, organizing data and interpreting charts, calculating central and spread measures, and summarizing and analyzing data.

COMPASS-Prealgebra 45 or ACT Mathematics preentry assmt 17 .

804-113 College Technical Math 1A 3 cr

Designed for the students who are preparing for a technical career, this course covers a variety of algebraic topics. These include solving linear, quadratic, and rational equations; a basic introduction to graphing; formula rearrangement; solving systems of equations; percent; proportions; and operations on polynomials. Emphasis will be on the application of skills to technical problems. Successful completion of College Technical Mathematics 1A and College Technical Mathematics 1B is the equivalent of College Technical Mathematics 1. Prerequisite: High school algebra or 854-771 or equivalent as determined by the Math Department Chair. Prerequisite(s): (COMPASS-Prealgebra 45 or COMPASS-Algebra 00 or ACT Mathematics preentry assmt 17) or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y) or 804-110 Elem Algebra w Apps.

804-114 College Technical Math 1B 2 cr

This course is a continuation of College Technical Mathematics 1A. Topics include measurement systems; computational geometry; right and oblique triangle trigonometry; and trigonometric functions on the unit circle. Emphasis will be on the application of skills to technical

problems. Successful completion of or concurrent enrollment in College Technical Mathematics 1A is required for course enrollment. Successful completion of College Technical Mathematics 1A and College Technical Mathematics 1B is the equivalent of College Technical Mathematics 1. Prerequisite(s): 804-113 College Technical Math 1A (or taken concurrently) or 804-141 Applied Algebra (or taken concurrently) or 804-196 College Technical Math 1A (or taken concurrently).

804-115 College Technical Math 1 5 cr

This course is designed for students who are preparing for a technical career. Topics studied in the course include solving linear, quadratic, and rational equations; graphing; formula rearrangement; solving systems of equations; percent; proportions; measurement systems; computational geometry; right and oblique triangle trigonometry; trigonometric functions on the unit circle; and operations on polynomials. The course will emphasize the use of mathematics as a problem solving tool with a wide variety of technical problems. Prerequisite: High school algebra or 854-771 or equivalent determined by Math Department Chair.

Prerequisite(s): (COMPASS-Algebra 35 or ACT Mathematics preentry assmt 18) or 804-110 Elem Algebra w Apps or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y).

804-116 College Technical Math 2 4 cr

College Technical Mathematics 2 is the second semester technical mathematics course offered to technical students in associate degree programs. The student uses the mathematical skills developed in College Technical Mathematics 1 to learn new skills in the use of number systems, Boolean algebra, radian measure and rotational motion, graphing trigonometric functions, exponential functions, logarithms, complex numbers, straight line and conic section functions, and the analysis of statistical data. The course will emphasize the use of mathematics as a problem solving tool with a wide variety of technical problems.

Prerequisite(s): 804-115 College Technical Math 1 or (804-113 College Technical Math 1A and 804-114 College Technical Math 1B).

804-118 Interm Algebra w Apps 4 cr

This course offers algebra content with applications. Topics include properties of real numbers, order of operations, algebraic solution for linear equations and inequalities, operations with polynomial and rational expressions, operations with rational exponents and radicals, algebra of inverse, logarithmic and exponential functions. Prerequisite: high school algebra or 854-771, or an equivalent as determined by the Math Department Chair.

Prerequisite(s): (COMPASS-Algebra 35 or ACT Mathematics preentry assmt 18) or 804-110 Elem Algebra w Apps or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y).

804-123 Math w Business Apps 3 cr

This course covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications.

Prerequisite(s): (COMPASS-Prealgebra 30 or ACT Mathematics preentry assmt 18) or 804-110 Elem Algebra w Apps or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y).

804-133 Math & Logic 3 cr

This course is designed for students pursuing a computer related degree. It includes basic elements of sets and functional notation; a review of algebra, encompassing simple equations; linear equations; systems of equations; number bases; systems of measurement; Boolean Algebra; an introduction to probability and statistics; and an introduction to trigonometry. Prerequisite: High school algebra or 854-771, or equivalent determined by the Math Department Chair.

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Prerequisite(s): (COMPASS-Prealgebra 45 or ACT Mathematics preentry assmt 17) or 804-110 Elem Algebra w Apps or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y).

804-189 Introductory Statistics 3 cr

Students taking this course will learn to display data with graphs, describe distributions with numbers, perform correlation and regression analyses, and design experiments. They will use probability and distributions to make predictions, estimate parameters, and test hypotheses. They will learn to draw inferences about relationships including ANOVA.

Prerequisite(s): (COMPASS-Prealgebra 45 or ACT Mathematics preentry assmt 17) or 804-110 Elem Algebra w Apps.

804-357 Mathematics-Building Trades 2 cr

Designed for students preparing for a career in the building trades, this course provides a review and expansion of math skills used in construction. Competencies include applying basic operations to whole numbers, fractions, decimals and percent; calculating with powers and roots; working with direct measurement; perimeter, area and volume; estimating material needs and cost; and some basic trigonometry.

804-360A Math for Tech Trades-Welding 2 cr

This course will study how technicians use arithmetic and algebra as problem solving tools. Topics include arithmetic skills with integers, decimals, and fractions. Algebraic skills involving equations, word problems, percents, and technical formulas will focus on the needs of the student's professional studies.

804-360B Math for Tech Trades-Ref AC Ht 2 cr

This course will study how technicians use arithmetic and algebra as problem solving tools. Topics include arithmetic skills with integers, decimals, and fractions. Algebraic skills involving equations, word problems, percents, and technical formulas will focus on the needs of the student's professional studies.

Restricted to students admitted to the following program(s): 31-401-1 Refrig. A/C Htg. Service Tech.

804-360C Math Tech Trades-Auto & Sm Eng 2 cr

This course will study how technicians use arithmetic and algebra as problem solving tools. Topics include arithmetic skills with integers, decimals, and fractions. Algebraic skills involving equations, word problems, percents, and technical formulas will focus on the needs of the student's professional studies.

Restricted to students admitted to the following program(s): 31-404-3 Automotive Maint Tech, 31-404-3 Automotive Maintenance Tech., 31-461-2 Motorcycle, Marine & Outdoor P, 31-405-1 Auto Collision Rpr & Ref Tech.

804-360D Math for Tech Trades-Diesel 2 cr

This course will study how technicians use arithmetic and algebra as problem solving tools. Topics include arithmetic skills with integers, decimals, and fractions. Algebraic skills involving equations, word problems, percents, and technical formulas will focus on the needs of the student's professional studies.

804-361 Math 10 2 cr

This course will study how technicians use arithmetic and algebra as problem solving tools. Topics include arithmetic skills with integers, decimals, and fractions. Algebraic skills with equations, word problems, percents, and technical formulas will focus on solving professional problems.

804-362 Math 20 2 cr

This course is designed for machinists to provide them with a solid background in geometry, trigonometry, numerical control geometry, measurement conversion techniques, and more algebra. Focus will be on applying the concepts to machining situations and problems.

Prerequisite(s): 804-361 Math 10.

804-363 Math for Electricity & Electric 2 cr

This is an applied technical math course designed for students in the Electrical Power Distribution program. The course includes measurement conversions, including metric prefix notation, a review of linear algebra, basic geometry, right triangle trigonometry, circular trigonometry, Ohm's Law applications, series and parallel circuits, and AC circuit applications.

806-Natural Science

806-112 Principles of Sustainability 3 cr

Prepares the student to develop sustainable literacy, analyze the interconnections among the physical and biological sciences and environmental systems, summarize the effects of sustainability on health and well-being, analyze connections among social, economic, and environmental systems, employ energy conservation strategies to reduce the use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal and recycling in the U.S., and analyze approaches used by your community to promote and implement sustainability.

806-134 General Chemistry 4 cr

Covers the fundamentals of chemistry. Topics include the metric system, problem-solving, periodic relationships, chemical reactions, chemical equilibrium, properties of water; acids, bases, and salts; and gas laws. Prerequisite of 854-771 and 856-771 or high school chemistry and algebra.

Prerequisite(s): (COMPASS-Prealgebra 45 or ACT Mathematics preentry assmt 18) and (COMPASS-Reading 80 or ACT Reading preentry assmt 18) or ACT Science Reasoning assmt 18 or 836-133 Prep for Basic Chemistry or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y).

806-143 College Physics 1 3 cr

Presents the applications and theory of basic physics principles. This course emphasizes problem solving, laboratory investigation and applications. Topics include laboratory safety, unit conversions and analysis, kinematics, dynamics, work, energy, power, temperature and heat.

Prerequisite(s): (804-113 College Technical Math 1A and 804-114 College Technical Math 1B) or 804-115 College Technical Math 1.

806-154 General Physics 1 4 cr

An overview of various physics topics, routinely covered in an introductory physics course, is presented with appropriate accompanying experiments. Included topics are: mechanics, properties of materials, heat, and sound. In addition to the technical science information given, an ability to solve problems, responsibility and initiative is emphasized.

Prerequisite(s): (804-114 College Technical Math 1B or 804-142 Applied Geometry & Trigonometry or 804-197 College Technical Math 1B) or (804-115 College Technical Math 1 or 804-151 Technical Math 110 or 804-195 College Technical Math 1) or (804-118 Interm Algebra w Apps or 804-150 Math 100 (Advanced Algebra)).

806-177 Gen Anatomy & Physiology 4 cr

Examines basic concepts of human anatomy and physiology as they relate to health sciences. Using a body systems approach, the course emphasizes the interrelationships between structure and function at the gross and microscopic levels of organization of the entire human body. It is intended to prepare health care professionals who need to apply basic concepts of whole body anatomy and physiology to informed decision-making and professional communication with colleagues and patients. Prerequisite of high school or college chemistry or 856-771 with a C or better.

Prerequisite(s): (COMPASS-Reading 80 or ACT Reading preentry assmt

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18 or ACT Science Reasoning assmt 18) or 856-774 Intro to Anatomy & Physiology or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y).

806-179 Adv Anatomy & Physiology 4 cr

This course is the second semester in a two-semester sequence in which normal human anatomy and physiology are studied using a body systems approach with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. Instructional delivery within a classroom and laboratory setting. Experimentation within a science lab will include analysis of cellular metabolism, the individual components of body systems such as the nervous, neuro-muscular, cardiovascular, and urinary. Continued examination of homeostatic mechanisms and their relationship to fluid, electrolyte, acid-base balance and blood. Integration of genetics to human reproduction and development are also included in this course.

Prerequisite(s): (806-177 Gen Anatomy & Physiology or 806-140 Anatomy & Physiology I).

806-186 Intro to Biochemistry 4 cr

Provides students with skills and knowledge of organic and biological chemistry necessary for application within Nursing and other Allied Health careers. Emphasis is placed on recognizing the structure, physical properties and chemical reactions of organic molecules, body fluids, and acids. Additional emphasis is placed on biological functions and their relationships to enzymes, proteins, lipids, carbohydrates, and DNA.

Prerequisite of high school or college chemistry or 856-771 with a C or better.

Prerequisite(s): 836-133 Prep for Basic Chemistry or (COMPASS-Prealgebra 45 or ACT Mathematics preentry assmt 18) and (COMPASS-Reading 80 or ACT Reading preentry assmt 18) or ACT Science Reasoning assmt 18 or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y).

806-189 Basic Anatomy 3 cr

Examines concepts of anatomy and physiology as they relate to health careers. Learners correlate anatomical and physiological terminology to all body systems. Prerequisite: High school biology.

Prerequisite(s): (COMPASS-Reading 80 or ACT Reading preentry assmt 18 or ACT Science Reasoning assmt 18) or 856-774 Intro to Anatomy & Physiology or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y).

806-197 Microbiology 4 cr

This course examines microbial structure, metabolism, genetics, growth, and the relationship between humans and microorganisms. Disease production, epidemiology, host defense mechanisms, and the medical impact of microbes in the environment, industry, and biotechnology are also addressed.

Prerequisite(s): 806-177 Gen Anatomy & Physiology or 806-140 Anatomy & Physiology I.

806-301 Basic Microbiology 2 cr

This two-credit course covers the structure and function of the microbial cell, pathogenic and nonpathogenic organisms, infectious processes, and the immune response. This course cannot be taken for credit if it follows successful completion of or is concurrent with Applied Microbiology (806-132).

806-321 Salon Science 2 cr

This course includes a basic introduction to chemical concepts of matter, properties, elements, compounds, classification of matter, and chemical reactions. Oxidation, acids and bases, pH, the solution process, and how these all relate to the spa and beauty industry, the biochemistry of proteins, lipids, carbohydrates, and other organic molecules and how they specifically relate to hair, skin, and nails. The nature cells, cell

reproduction, melanin, and how chemical products such as lotions, shampoos, conditioners, etc., interact with these systems will be studied. Also examined will be the physical concepts of light and color and the electromagnetic spectrum, and its affects on the human body. Also, basic electricity, electrical safety, and energy conservation within the spa/salon will be examined.

Restricted to students admitted to the following program(s): 31-502-1 Barber-Cosmetologist.

806-341 Vocational Science 2 cr

Provides an introduction to basic physical principles involved in mechanics, hydraulics, thermodynamics, and electronics. Practical utilization of these principles in various technologies is analyzed with reinforcement from problem solving and laboratory exercises.

Prerequisite(s): 804-361 Math 10 or 804-363 Math for Electricity & Electrnrc.

809-Social Science

809-122 Intro to Amer Government 3 cr

Introduces American political processes and institutions. Focuses on rights and responsibilities of citizens and the process of participatory democracy. Learners examine the complexity of the separation of powers and checks and balances. Explores the role of the media, interest groups, political parties, and public opinion in the political process. Also explores the role of state and national government in our federal system.

Prerequisite(s): (COMPASS-Reading 70 or ACT Reading preentry assmt 16) or 808-110 College Reading or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y).

809-128 Marriage & Family 3 cr

This course introduces the student to the sociological aspects of marriage and family life in contemporary American society. Emphasis is on the study of cognitive, emotional, and behavioral patterns associated with courtship, love, mate selection, sexuality, and marriage. Moreover, it discusses the life span development in the family life cycle, balancing work and family, and parenting. This course is based on the premise that human attitudes, feelings, and behaviors are largely shaped and influenced by philosophy, gender, communication, and personal beliefs. Therefore, success in the institutions of marriage and family require knowledge and skills in the roles of spouse and parent and ways to apply concepts to daily life.

Prerequisite(s): (COMPASS-Reading 70 or ACT Reading preentry assmt 16) or 808-110 College Reading or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y).

809-159 Abnormal Psychology 3 cr

This course surveys the essential features, possible causes, and assessment and treatment of the various types of abnormal behavior from the viewpoint of the major theoretical perspectives in the field of abnormal psychology. Students will be introduced to the diagnosis system of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). In addition, the history of the psychology of abnormality will be traced. Cultural and social perspectives in understanding and responding to abnormal behavior will be explored as well as current topics and issues within abnormal psychology.

Prerequisite(s): 809-198 Intro to Psychology.

809-166 Intro to Ethics: Theory & App 3 cr

This course provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social, and/or professional standards of behavior and apply a systematic decision-making process to these situations.

Course Descriptions

Prerequisite(s): (COMPASS-Reading 70 or ACT Reading preentry asmt 16) or 808-110 College Reading or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry asmt Y).

809-172 Race Ethnic & Diversity 3 cr

This is a course that draws from several disciplines to reaffirm the basic American values of justice and equality by teaching a basic vocabulary, a history of immigration and conquest, principles of transcultural communication, legal liability and the value of aesthetic production to increase the probability of respectful encounters among people. In addition to an analysis of majority/minority relations in a multicultural context, the topics of ageism, sexism, gender differences, sexual orientation, the disabled and the American Disability Act (ADA) are explored. Ethnic relations are studied in global and comparative perspectives.

Prerequisite(s): (COMPASS-Reading 70 or ACT Reading preentry asmt 16) or 808-110 College Reading or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry asmt Y).

809-174 Social Problems 3 cr

Explores the causes of and possible solutions to selected social problems such as inequality, crime and deviance, and poverty. Students will examine the interrelationship of social problems and their roots in fundamental societal institutions.

Prerequisite(s): (COMPASS-Reading 70 or ACT Reading preentry asmt 16) or 808-110 College Reading or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry asmt Y).

809-188 Developmental Psychology 3 cr

This is the study of human development throughout the lifespan. This course explores developmental theory and research with an emphasis on the interactive nature of the biological, cognitive, and psychosocial changes that affect the individual from conception to death. Application activities and critical thinking skills will enable students to gain increased knowledge and understanding of themselves and others. It is recommended that either Intro to Psychology (809-198) or Psychology of Human Relations (809-199) be completed before taking this course.

Prerequisite(s): 808-110 College Reading or (COMPASS-Reading 70 or ACT Reading preentry asmt 16) or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry asmt Y).

809-195 Economics 3 cr

Designed to give an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues.

Prerequisite(s): (COMPASS-Reading 70 or ACT Reading preentry asmt 16) or 808-110 College Reading or (Assoc Degree preentry asmt Y or Bachelor's Arts Y or Bachelor's Science Y).

809-196 Intro to Sociology 3 cr

Basic study of the role of society, culture and socialization in shaping individual behavior and societal institutions. Emphasis is placed upon applying sociological principles to both students' job settings and to their interpersonal relationships.

809-197 Contemporary Amer Society 3 cr

This course examines the network of interdependent social systems that affect learners as employees, family members, and citizens. In this interdisciplinary course learners will study public policy issues that illustrate how our traditional institutions such as family, education, government, work, and media are being changed by global, political, demographic, multicultural, and technological trends. By exploring contemporary is-

suers, learners will expand their use of creative and critical thinking skills in evaluating information, making decisions, advocating positions, and participating in the democratic process. Emphasis is placed on the foundation and structure of American society and the impact that diversity has on its institutions.

Prerequisite(s): (COMPASS-Reading 70 or ACT Reading preentry asmt 16) or 808-110 College Reading or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry asmt Y).

809-198 Intro to Psychology 3 cr

This introductory course in psychology is a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. Additional topics include research methods, biological and environmental impacts, development, sensation and perception, consciousness, intelligence and stress. This course directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings.

Prerequisite(s): (COMPASS-Reading 70 or ACT Reading preentry asmt 16) or 808-110 College Reading or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry asmt Y).

809-199 Psychology of Human Relations 3 cr

Students will become acquainted with the basic theories and concepts of psychology and human behavior, enabling them to be more effective in their work and personal lives. A better understanding of human relations will help the individual adjust and grow in a complex society.

Prerequisite(s): (COMPASS-Reading 70 or ACT Reading preentry asmt 16) or 808-110 College Reading or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry asmt Y).

809-351 Occupational Relations 2 cr

This course is designed to provide the student with a basic understanding of the human relations skills necessary to succeed in a total quality work environment. This will include workplace trends, team-building skills, customer and co-worker relations, attitude and motivation, safety and stress management, diversity, employment law, and financial and benefits planning.

Liberal Arts-Associate of Science

801-219 English Composition 1 3 cr

Develops critical thinking, reading, writing, listening, and speaking for both exposition and argumentation. Emphasizes clarity, concision, concreteness, synthesis of information, and completeness of expression, supported by reasoning, organization, and language conventions for research, presentations, and other discourse.

Prerequisite(s): (COMPASS-Writing 69 or ACT English Assessment 18) or 831-103 Intro to College Writing or (Bachelor's Science Y or Bachelor's Arts Y).

801-223 English Composition 2 3 cr

Advances composition skills, emphasizing well-reasoned argumentative research papers. Focuses on critical thinking, college-level discourse, as well as the following modes of literacy: writing, speaking, reading, and listening. Increases understanding and appreciation of the genres through analyzing and writing about fiction, drama, and poetry. Students conduct research using primary and secondary library resources, surveys and questionnaires, observations and interviews, documented in the MLA, APA, or Chicago-style formats. Students develop an appreciation for the stylistic, constructive and linguistic conventions of baccalaureate writing and communication as they apply to their own academic disciplines.

Prerequisite(s): 801-219 English Composition 1.

Course Descriptions

803-227 American Government

3 cr

American Government acquaints students with American political processes and institutions via a system approach which emphasizes the relationship between structure and behavior. The interrelationship of our state and national governments will first be analyzed in detail stressing political theory and methodology. Students will then examine, research, and analyze the complexity of the concept of separation of powers (“checks and balances”) between Congress, the judiciary, the presidency, and the bureaucracy as well as explore the role of the media, interest groups, political parties and public opinion in the political process before focusing on the Constitutional rights and responsibilities of citizens and how those citizens access the process of participatory democracy, including elections, most effectively.

804-224 College Algebra

4 cr

Studies properties of the real and complex number systems; quadratic, polynomial, rational, exponential and logarithmic functions; equations and inequalities; the use of matrices and determinants in solving systems of equations, sequences, series, and probability.

Prerequisite(s): (COMPASS-Algebra 66 or ACT Mathematics preentry assmt 22) or (Bachelor’s Science Y or Bachelor’s Arts Y) or 804-118 Interm Algebra w Apps.

804-228 Plane Trigonometry

3 cr

Covers trigonometric functions and their inverse functions, graphing trigonometric functions, trigonometric identities, solving triangles, solving equations and inequalities, complex numbers in trigonometric form, and polar curves.

Prerequisite(s): (804-118 Interm Algebra w Apps or 804-115 College Technical Math 1) or (COMPASS-Algebra 66 or ACT Mathematics preentry assmt 22) or (Bachelor’s Arts Y or Bachelor’s Science Y).

804-230 Statistics

4 cr

Studies appropriate statistical techniques for the systematic collection, presentation, analysis and interpretation of data using experimental and quasi-experimental methods found in research. Studies statistical inference including techniques, confidence intervals, types I and II errors, hypothesis testing, and results interpretation. Also includes descriptive statistics, basic probability-theory, the Central Limit Theorem; the binomial, normal, Student t, chi-squared, and F distributions; and techniques of 1 and 2 sample tests, linear regression, correlation, sample sizes, an introduction to analysis of variance and selected nonparametric procedures. May require use of a graphing calculator or computer software.

Prerequisite(s): (804-224 College Algebra or 804-118 Interm Algebra w Apps or 804-115 College Technical Math 1) or (COMPASS-Algebra 66 or ACT Mathematics preentry assmt 22) or (Bachelor’s Science Y or Bachelor’s Arts Y).

804-236 Calculus & Analytic Geometry 1

5 cr

Introduces the basic properties of limits, rate of change of functions, continuity, derivatives of algebraic and elementary transcendental functions and its applications, the definite integral and its applications, logarithmic, exponential, inverse trigonometric and hyperbolic functions, curve sketching, finding maxima and minima.

Prerequisite(s): 804-224 College Algebra and 804-228 Plane Trigonometry.

804-240 Calculus & Analytic Geometry 2

5 cr

Includes techniques and applications of integration, numerical approximation of definite integrals, improper integrals, infinite series, and an introduction to first order differential equations, parametric equations and derivatives of parametric curves, polar coordinates in the plane and integrals using polar coordinates, an introduction to vectors in two and three dimensions, transcendental functions, indeterminate forms, Taylor’s formula, topics from analytic geometry, plane curves and polar

coordinates, vectors, and surfaces. Prerequisite(s): 804-236 Calculus & Analytic Geometry 1. Prerequisite(s): (COMPASS-Reading 80 or ACT Reading preentry assmt 18 or ACT Science Reasoning assmt 18) or (856-774 Intro to Anatomy & Physiology or 806-245 Principles of Gen Chemistry 1) or (Bachelor’s Arts Y or Bachelor’s Science Y).

806-201 Principles of Biology

4 cr

Explores fundamental principles of ecology, genetics, evolution, organism structure and function. Some lab sections are specially designed for elementary/special education students who are likely to pursue a career in fields other than the biological or medical sciences.

Prerequisite(s): (COMPASS-Reading 80 or ACT Reading preentry assmt 18 or ACT Science Reasoning assmt 18) or 836-113 Prep for Basic Biology or (Bachelor’s Arts Y or Bachelor’s Science Y).

806-207 Anatomy & Physiology 1

4 cr

The fundamentals of bodily function are studied at the cellular, tissue, organ, and organ system levels. Integration of physiological function and anatomical structure will be highlighted in the skeletal, muscular, nervous, and endocrine systems. Prerequisite(s): (COMPASS-Reading 80 or ACT Reading preentry assmt 18 or ACT Science Reasoning assmt 18) or (856-774 Intro to Anatomy & Physiology or 806-245 Principles of Gen Chemistry 1) or (Bachelor’s Arts Y or Bachelor’s Science Y).

806-245 Principles of Gen Chemistry 1

5 cr

Introduces the laboratory and the scientific method as tools in the study of chemical transformations and the properties of matter. It includes the topics of measurement, chemical nomenclature, chemical reactions and stoichiometry, atomic structure, gas laws, thermochemistry, chemical bonding, kinetics, equilibria, electrochemistry and topics in organic and biochemistry. Qualitative analysis is included in the laboratory course.

Prerequisite(s): 836-133 Prep for Basic Chemistry or 856-771 Basic Chemistry Calculations or (Bachelor’s Science Y or Bachelor’s Arts Y) or (COMPASS-Reading 80 or ACT Reading preentry assmt 18) and (COMPASS-Algebra 40 or ACT Mathematics preentry assmt 18) or ACT Science Reasoning assmt 18

806-249 Principles of Gen Chemistry

2 cr

Includes applications of principles to and mathematical treatment of the topics of kinetics, equilibrium, thermodynamics, electrochemistry, coordination compounds, nuclear chemistry, organic structures, biochemistry, and nomenclature. Qualitative analysis is included in the laboratory course.

Prerequisite(s): 806-245 Principles of Gen Chemistry 1.

806-276 Principles of General Physics 1

5 cr

Develops a conceptual understanding of the basics of physics and provides practical hands-on lab to broaden the understanding of physics. Covers the basic properties of motion, force, energy, momentum, rotation, fluids, heat, sound. Stresses developing good problem-solving strategies.

Prerequisite(s): 856-772 Basic Physics or (Bachelor’s Science Y or Bachelor’s Arts Y) or (COMPASS-Reading 80 or ACT Reading preentry assmt 18) and (COMPASS-Algebra 66 or ACT Mathematics preentry assmt 22) or ACT Science Reasoning assmt 18.

806-280 Principles of General Physics 2

4 cr

Studies electricity, magnetism, geometric and physical optics, basics of modern physics topics.

Prerequisite(s): 806-276 Principles General Physics 1.

809-200 Diversity/Ethnic Studies

3 cr

Course credits taken at another accredited technical college, university or community college will be reviewed for transfer to fulfill the diver-

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sity/ethnic studies requirement for the Liberal Arts degree at CVTC. The following are types of courses that would apply; Ethics, Diversity in the Work Place, Cultures such as the American Indian, Ethical Citizenship, Business Ethics.

809-251 General Psychology **3 cr**

Surveys individual and social behavior including its psychological and physiological bases, development, motivation, emotion, perception, learning and behavior disorders. Studies the methods, principles, and theories of contemporary psychology as applied to understanding, predicting, and modifying human behavior.

Prerequisite(s): COMPASS-Reading 80 or 808-110 College Reading or ACT Reading preentry assmt 18 or (Bachelor's Science Y or Bachelor's Arts Y) or 838-104 Intro to College Reading.

809-271 Introductory Sociology **3 cr**

Defines and examines concepts and realities of social structure, the social processes that shape behavior, culture, socialization, social groups, and social change. Analyzes concepts and phenomena such as complex organizations, roles, stratification, class, inequality, deviance, and race. Examines institutions such as the family, religion, education, politics, economics and the media.

Prerequisite(s): (COMPASS-Reading 80 or ACT Reading preentry assmt 18) or (Bachelor's Science Y or Bachelor's Arts Y) or (838-104 Intro to College Reading or 808-110 College Reading).

809-291 Princ of Econ-Microeconomics **3 cr**

Introduces, describes, and analyzes how markets work emphasizing what they do well and how they fail and how individuals, businesses, and governments choose to use scarce resources. Includes descriptions, analyses and critiques of various methods of government intervention in the economy. Analyzes current issues using economic concepts such as income distribution, monopoly, and efficiency. Analyzes business decisions with regard to cost analysis, output determinations; the price system, mechanisms, and determination in the products and factors of production. Discusses other topics such as the environment, regulation vs. deregulation, international markets and trade, technology and economic development.

Prerequisite(s): (ACT Mathematics preentry assmt 18 or COMPASS-Prealgebra 40) and (COMPASS-Reading 80 or ACT Reading preentry assmt 18) or (Bachelor's Arts Y or Bachelor's Science Y) or 804-110 Elem Algebra w Apps.

810-201 Fundamentals of Speech **3 cr**

Examines theory and process of communication, the role of speech in self-development, the nature of meaning, the art of persuasion, topic selection, the use of research-based evidence, and audience analysis. Includes organizing speech content, speech delivery and critique via presentation of informative and persuasive speeches and development of effective extemporaneous speaking style. Students gain self-confidence, proficiency, and poise.

Prerequisite(s): COMPASS-Reading 80 or ACT Reading preentry assmt 18 or (Bachelor's Science Y or Bachelor's Arts Y) or 838-104 Intro to College Reading or 808-110 College Reading.

Prepared Learner (PL)

Prepared Learner classes are designed to get students ready for a variety of college-level academics, including reading, writing, math and science. Scores on the COMPASS® or ACT® assessments will tell us if you need to take one or more areas of these classes, which may be required for some General Education classes. Students must successfully complete each required Prepared Learner class with a C grade or better before registering for some General Education courses.

801-120 Beginning Composition **3 cr**

As preparation for Written Communication (801-195), students will concentrate on writing effective sentences, cohesive paragraphs, and well-developed five-paragraph essay. Students will also respond to readings and other students' writing, critique their own writing and implement suggestions from others, expand their vocabularies, adhere to the writing process, and word process their documents.

808-110 College Reading **3 cr**

Students develop reading skills necessary to be successful college students. Areas of concentration include: improving ability to read college textbooks and technical materials, building vocabulary and reading comprehension, learning appropriate reading strategies, developing speed in reading, and applying reading skills to test-taking.

Prerequisite(s): COMPASS-Reading 62 or ACT Reading preentry assmt 14 or 838-105 Intro Reading & Study Skills or (Bachelor's Science Y or Bachelor's Arts Y or Assoc Degree preentry assmt Y).

831-103 Intro to College Writing **3 cr**

Introduces basic principles of composition, including organization, development, unity, and coherence in paragraphs and multi-paragraph documents.

Prerequisite(s): (COMPASS-Writing 35 or ACT English Assessment 16) or 801-120 Beginning Composition or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y).

834-109 Pre-Algebra **3 cr**

Provides an introduction to algebra. Includes operations on real numbers, solving linear equations, percent and proportion, and an introduction to polynomials and statistics. Prepares students for elementary algebra and subsequent algebra related courses.

834-110 Elem Algebra w/ Apps **3 cr**

This course offers traditional algebra topics with applications. Learners develop algebraic problem-solving techniques necessary for more advanced algebraic studies. Topics include linear equations, exponents, polynomials, rational expressions, and roots and radicals. Topics will be woven with applications to real world situations.

836-113 Prep for Basic Biology **2 cr**

Introduces student to basic principles of biology. Students become familiar with the nature of science, basic biochemistry concepts, and the structure and function of a cell.

Prerequisite(s): COMPASS-Reading 62 or (ACT Reading preentry assmt 14 or ACT Science Reasoning assmt 16) or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y) or 838-105 Intro Reading & Study Skills.

836-133 Prep for Basic Chemistry **2 cr**

Introduces basic principles of chemistry including the properties of matter, atomic structure, and the classification of chemical reactions. Students learn to characterize solutions, acids, and bases, and differentiate between elements and compounds.

Prerequisite(s): (COMPASS-Reading 62 or ACT Reading preentry assmt 14) and (COMPASS-Prealgebra 30 or COMPASS-Algebra 00 or ACT Mathematics preentry assmt 16) or ACT Science Reasoning assmt 16 or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry

Course Descriptions

assmt Y) or 854-707 Pre-Algebra or 834-109 Pre-Algebra.

838-104 Intro to College Reading **2 cr**

Provides learners with opportunities to develop and expand reading skills including comprehension and vocabulary. Learners apply reading skills to academic tasks and read to acquire information from a variety of sources.

(COMPASS-Reading 62 or ACT Reading preentry assmt 14) or (Bachelor's Arts Y or Bachelor's Science Y).

838-105 Intro Reading & Study Skills **3 cr**

This course provides learners with opportunities to develop study skills and expand reading skills including comprehension, fluency, and vocabulary skills. Learners apply reading skills to academic tasks and read to acquire information from a variety of sources.

856-774 Intro to Anatomy & Physiology **2 BSE cr**

Introduces fundamental principles of anatomy and physiology including body orientation, basic terminology, biochemistry, cell biology, histology, and a brief overview of body systems.

Prerequisite(s): COMPASS-Reading 62 or (ACT Reading preentry assmt 14 or ACT Science Reasoning assmt 16) or (Bachelor's Arts Y or Bachelor's Science Y or Assoc Degree preentry assmt Y) or 838-105 Intro Reading & Study Skills.

890-General Studies

890-103 Employability Strategies P.S. **1 cr**

This 18-hour course, required for the Fire Protection Technician program, is designed to assist students in their job search, employment securement, and work retention. Focus is placed on interpersonal skill development, including oral and written skills.

Restricted to students admitted to the following program(s): 10-503-2 Fire Protection Tech, 10-531-2 FireMedic.

890-130 Introduction to College Life **2 cr**

Students will prepare for a successful transition to CVTC. This course is designed to enhance student development and learning through the examination of career, personal, and academic issues that influence their college experience. Learners will also explore common new-student issues that individuals face at CVTC and develop a personalized success plan.

Getting Started - Admissions

Follow these easy steps to begin your journey towards a degree or diploma.

Step 1 – Choose Your Program

Your first step is to identify your program of interest and review its admission requirements. Each program has a unique set of admission requirements and specific entry points. Determine the semester in which you would like to be admitted. If you need help in deciding which program option is for you, CVTC offers career planning workshops each month. To register for a career planning workshop:

- At the Eau Claire Clairemont Campus, call 715-833-6346 or stop by the Counseling and Advising Center.
- At the River Falls Campus, career planning is available on an individual basis. Please contact 715-425-3301 to schedule an appointment.

Step 2 - Complete an Admissions Application

To ensure faster processing, we encourage applicants to complete an on-line application found on the College's website, <http://www.cvtc.edu/apply>. If you do not have internet access, contact the College for a paper application. A one-time nonrefundable application processing fee of \$30 is required at the time of application.

Applicants are strongly encouraged to complete their applications as soon as possible. Preferred application dates are:

- prior to or by July 1 for the fall semester.
- prior to or by November 1 for the spring semester.

Applying before these dates ensures priority registration and class selection. Early application also allows time to apply for financial aid or to make other payment arrangements.

Step 3 - Complete Requirements

All CVTC programs require a COMPASS® pre-entry assessment, and many programs require minimum scores as an admission requirement. To schedule an appointment to take COMPASS®, visit the College website and make your own appointment or call 715-833-6200 for assistance in setting up an appointment. Assessment services are available at CVTC campuses in Eau Claire, Chippewa Falls, Menomonie, Neillsville, and River Falls. The cost of the assessment is \$20.

The ACT® College entrance exam may be used in place of COMPASS®. Individuals who have completed an Associate Degree or Bachelor's Degree may be exempt from this requirement. Verification of the completion of these options must be submitted to the Admissions Office.

Many programs also have other admissions requirements. Examples of requirements that may apply to your program are:

- high school diploma or equivalency,
- Wisconsin criminal background check,
- required information sessions and
- academic course work.

Tips for High School Students

High school students may apply beginning in mid-September of their senior year. The CVTC Admissions Office will begin processing these applications the first Monday in October.

Youth Options. High school juniors and seniors in public school districts may enroll in CVTC classes through Wisconsin's Youth Options program. Classes may apply toward both high school graduation and a degree at CVTC. Students must indicate their interest by submitting a form to their local high school office by March 1 for the fall semester and by October 1 for the spring semester. Contact your local high school for forms and additional information. CVTC's Youth Options Coordinator is also available for assistance at 715-852-1365. Students enrolled in classes under the Youth Options program must abide by the CVTC calendar, policies, and procedures as outlined in the Student Handbook.

Students are encouraged to take the COMPASS® assessment or submit ACT® scores to CVTC prior to class registration. These scores are prerequisites to many general education courses.

Youth Options students who plan to complete a degree or diploma at CVTC after high school graduation must apply for admission during their senior year following the four steps listed previously. Youth Options students are not automatically admitted to a College program.

Getting Started - Admissions

Residency Requirements

The State of Wisconsin requires that an individual reside in Wisconsin for one year to be considered for in-state tuition. Individuals residing outside of Wisconsin are required to pay out-of-state tuition, with the exception of Minnesota residents. The current reciprocity agreement between Wisconsin and Minnesota enables a Minnesota resident to attend CVTC and pay Wisconsin tuition.

Individuals who wish to have their residency reviewed should complete a Residency Determination form. Questions may be directed to the Director of Enrollment Services at 715-833-6245.

Out-of-State Resident Tuition Costs

The tuition rate for the 2011-2012 school year for out-of-state residents is \$167.80 per credit (\$225 per credit for the Liberal Arts Program), subject to change each year. It is the student's responsibility to pay out-of-state tuition for the duration of their attendance at CVTC.

Tips for International Students

CVTC has been approved by the U.S. Citizenship and Immigration Service (CIS) to admit international students in F-1 status and issue I-20 forms. International students may only apply for associate degree programs. Prospective students should meet with the Designated School Official (DSO) to ensure that all CVTC and CIS requirements are met. For more information, call 715-833-6343 or visit the College Web site.

Guidelines for international students are as follows:

- Meet all CVTC admissions requirements.
- Achieve a minimum score of 500 on the TOEFL test or provide comparable evidence of English proficiency.
- Provide evidence of sufficient funds to pay all living expenses, school-related costs, and return airfare to country of origin.
- Pay all tuition, books, material, and other fees upon registering for classes each semester.
- Provide evidence of health insurance.
- Remain 'in status' according to CIS regulations for the duration of attendance at CVTC.



Chippewa Valley Technical College - 2011-2012 Resident Fee ESTIMATES

The estimated costs provided are based on current tuition and fee rates and are intended for planning purposes only. Actual fees will be assessed at time of registration and are based on courses and credits for which the student registers.

ESTIMATES below are by SEMESTER, and include Activity fee of \$6.15 per credit, tuition of \$111.85 per credit and Material Fees established by the Wisconsin Technical College Board. EXCEPTION: Activity fee of \$6.15 per credit, tuition of \$150.00 per credit and Material Fees established by the Wisconsin Technical College Board for the Liberal Arts-Associate of Science (formerly University Transfer) program.													*Elective Course Not Included	
Programs are offered in traditional 16-week semester programs unless indicated otherwise by footnotes	1st Term	2nd Term	Summer Term	3rd Term	4th Term	Summer Term	5th Term	6th Term	7th Term	8th Term	9th Term	Special Fees/ Tools	Total Book Fees	Total Program Fees
													*For more current price see efollett.com	*Including Books
Accounting (6)	\$1,934	\$2,290		\$1,942	\$2,049								\$2,759	\$10,974
Administrative Professional	\$1,928	\$2,064		\$1,934	\$2,040								\$3,198	\$11,163
Agriscience Technician - Animal Science	\$2,326	\$1,797	\$611	\$2,091	\$1,829								\$1,737	\$10,390
Agriscience Technician - Agronomy Tech	\$1,953	\$2,284	\$620	\$2,348	\$1,707								\$1,737	\$10,649
AC, Heating & Ref Tech (4)(7)	\$2,336	\$2,487		\$2,084	\$2,069							\$600	\$2,242	\$11,818
Alcohol & Other Drug Abuse Associate	\$2,157	\$2,157	\$372	\$2,161	\$1,443							\$361	\$1,927	\$10,579
Auto Collision & Repair (4)	\$2,432	\$2,333	\$974									\$3,584	\$405	\$9,728
Automotive Maint Tech (3)(4)	\$2,143	\$1,823										\$4,693	\$394	\$9,052
Automotive Technician (3) (4)	\$2,143	\$1,823	\$974	\$1,687	\$1,455							\$4,693	\$647	\$13,421
Barber/Cosmetology (4)(5)	\$2,378	\$2,266	\$1,192	\$1,192								\$721	\$683	\$8,432
Business Management	\$2,040	\$1,927		\$2,040	\$2,161								\$2,687	\$10,854
Central Service Technician	\$1,702											\$18	\$626	\$2,345
Child Care Services	\$2,091	\$1,708											\$1,301	\$5,099
Civil Engineering Technician - Structural	\$2,222	\$2,213		\$2,127	\$2,080								\$1,747	\$10,389
Clinical Laboratory Technician	\$2,098	\$2,339	\$729	\$1,989	\$1,561							\$206	\$2,258	\$11,178
Criminal Justice - Law Enforcement	\$1,918	\$2,157		\$2,095	\$1,918								\$2,315	\$10,403
Criminal Justice - Law Enforcement Academy	\$3,200												\$0	\$3,200
Dental Assistant	\$2,329											\$48	\$198	\$2,575
Dental Hygienist - 2-Year Track	\$497	\$151	\$2,261	\$2,142	\$2,024	\$2,081						\$813	\$1,448	\$11,416
Diagnostic Medical Sonography	\$1,965	\$2,501	\$729	\$2,116	\$1,204	\$376						\$64	\$2,035	\$10,989
Diesel & Heavy Equip Tech (3)(4)	\$2,279	\$2,112		\$2,317	\$2,238							\$4,850	\$868	\$14,664
Early Childhood Education	\$2,182	\$1,851		\$2,182	\$2,157								\$2,468	\$10,840
Electrical Power Distribution (3)	\$2,408	\$2,110										\$842	\$989	\$6,349
Electromechanical Technology (3)	\$2,170	\$2,180		\$2,406	\$2,323								\$2,258	\$11,336
Environmental Ref, AC & Heating Service Tech (3)(4)	\$2,101	\$1,862										\$600	\$758	\$5,321
Farm Business & Prod Mgmt - Part-Time 6-Year Track	\$2,863												\$0	\$2,863
Firemedic (4)	\$2,247	\$1,756	\$799	\$2,319	\$1,788							\$820	\$2,292	\$12,021
Health Information Technology	\$1,953	\$1,933	\$729	\$1,952	\$1,466							\$277	\$1,846	\$10,156
Human Resources	\$2,040	\$1,918		\$2,157	\$2,161								\$2,995	\$11,271
Individualized Technical Studies	\$2,118	\$1,792		\$1,820	\$1,918								\$2,273	\$9,922
Industrial Mechanic (2)(3)(4)	\$2,329	\$2,452		\$989									\$1,009	\$6,778
Information Technology - Network Specialist	\$2,187	\$1,976		\$2,204	\$1,939								\$1,667	\$9,974
Information Technology - Programmer/Analyst	\$2,059	\$2,180		\$2,180	\$2,220								\$1,305	\$9,944
Landscape, Plant and Turf Management	\$1,963	\$2,093	\$372	\$1,876	\$2,060								\$0	\$8,279
Machine Tooling Technics (2)(3)(4)	\$2,030	\$2,122		\$2,027	\$2,100							\$967	\$579	\$9,825
Marketing Management	\$2,040	\$1,806		\$2,172	\$2,164								\$1,785	\$9,967
Medical Assistant (7)	\$1,992	\$1,744	\$372										\$939	\$5,189

(For Non-Resident fee and status information, contact CVTC at 715-833-6245 or 1-800-547-2882, ext. 6245)

Please refer to last page of these estimates for footnotes and other fee information.

SUBJECT TO CHANGE WITHOUT NOTICE

Chippewa Valley Technical College - 2011-2012 Resident Fee

The estimated costs provided are based on current tuition and fee rates and are intended for planning purposes only. Actual fees will be assessed at time of registration and are based on courses and credits for which the student registers.

ESTIMATES below are by SEMESTER, and include Activity fee of \$6.15 per credit, tuition of \$111.85 per credit and Material Fees established by the Wisconsin Technical College Board. EXCEPTION: Activity fee of \$6.15 per credit, tuition of \$150.00 per credit and Material Fees established by the Wisconsin Technical College Board for the University Transfer-Liberal Arts program.													*Elective Course Not Included	
Programs are offered in traditional 16-week semester programs unless indicated otherwise by footnotes	1st Term	2nd Term	Summer Term	4th Term	5th Term	6th Term or Summer	7th Term	8th Term	9th Term	10th Term	11th Term	Special Fees/Tools	Total Book Fees *For more current price see efollett.com	Total Program Fees *Including Books
Motorcycle, Marine & Outdoor Power Products Tech (3)(4)	\$2,173	\$2,073	\$807									\$3,739	\$790	\$9,582
Nursing - Associate Degree - 2-Year Track (1)	\$2,342	\$2,094		\$2,332	\$1,845							\$188	\$2,301	\$11,102
Nursing - Associate Degree - Part-Time 4-Year Track (7)	\$1,082	\$869		\$1,056	\$999	\$512	\$1,216	\$1,106	\$412	\$725	\$752	\$188	\$2,301	\$11,219
Nursing Assistant - 108 Hours	\$397											\$19	\$79	\$495
Paralegal (6)(7)	\$1,800	\$2,163		\$2,157	\$1,800								\$2,174	\$10,095
Paramedic Technician (5)	\$1,901	\$1,007	\$1,790	\$1,678	\$1,454							\$800	\$850	\$9,480
Pharmacy Technician	\$2,032	\$2,009										\$31		\$4,072
Physical Therapy Assistant	\$1,978	\$2,096	\$729	\$1,987	\$1,844							\$61		\$8,695
Radiography (1)	\$2,169	\$2,139	\$754	\$1,443	\$1,703	\$510						\$231	\$805	\$9,753
Renal Dialysis Technician	\$2,092	\$1,469										\$31	\$710	\$4,302
Respiratory Therapist	\$2,030	\$1,891	\$765	\$2,069	\$2,174							\$106	\$1,862	\$10,897
Surgical Technologist (June Entry)	\$869	\$1,931	\$1,810									\$221	\$689	\$5,519
Technical Studies - Journeyworker	\$3,909	\$1,549	\$1,012	\$1,365									\$625	\$8,461
Truck Driving - 8 weeks (4)(5)(8)	\$2,212												\$165	\$2,377
University Transfer - Liberal Arts Associate of Science (9)	\$2,536	\$2,536		\$2,536	\$2,536								\$730	\$10,875
Welding (3)(4)(7)	\$2,900	\$2,543	\$1,018									\$553	\$548	\$7,562
Welding - Part-Time Evening (7)	\$1,712	\$1,712		\$1,403	\$1,612							\$553	\$548	\$7,540
Wood Technics (3)			\$138	\$2,449	\$2,443							\$1,118	\$652	\$6,800

Tuition and fees presented here are approximate costs based on the program sequence on CVTC's Program Planning Sheets and are subject to change. Fees vary according to the term of enrollment and the number of credits.

Some book costs and Special Fees/Tools are based on the prior school year and are likely to change and should be used for estimating only.

FOOTNOTES:

- Each semester fee may include credits assessed and / or earned subsequent to that semester in clinical or other setting.
- These programs admit students every 8 weeks, offering a mix of 8 and 16-week courses.
- Safety glasses required.
- Special fees may include tool boxes, shop/lab coats, safety glasses, parts room deposit, shirts, etc., depending on the program. Most special fees are due the first semester, however, some fees are due in semesters 2, 3, and 4.
- Program meets in 8-week terms.
- Some course offerings available through Internet based instruction.
- Offered Part-time basis and Evenings.
- Weekend offerings.
- Joint program with UW System Schools. Some courses must be taken at a participating University and UW fees may apply. Estimates are based on Wisconsin Technical College System tuition and fee rates of \$142.20 per credit for in-state residents and \$213.30 per credit for out-of-state residents.

NOTE TO OUT-OF-STATE RESIDENTS: 2011-2012 tuition rate for out-of-state residents is \$167.80 per credit plus an activity fee of \$9.12 per credit. Please note that out-of-state tuition fees do not apply to distance education offerings through our virtual campus. The tuition rate of \$111.85 per credit applies to Wisconsin and Minnesota (Reciprocity Agreement) residents. International students need to contact the Admissions Manager at (715) 833-6245 or email: sbrehm@cvtc.edu.

(For Non-Resident fee and status information, contact CVTC at 715-833-6245 or 1-800-547-2882, ext. 6245)

Please refer to the footnotes for additional fee information.

Transportation Costs: Some programs have required internships or clinical experiences. The sites where students work or practice are off campus and may be in the same community as the College or may be in surrounding communities. Transportation costs to the work site or clinical site will be incurred by the student.

SUBJECT TO CHANGE WITHOUT NOTICE

Paying for College

Tuition and Other Fees

Tuition and material fees are charged on a per-credit basis and may vary each year. The tuition rate for 2011-12 is \$111.85 per credit (\$150 per credit for the Liberal Arts-Associate of Science Program). Additional fees by course may also be charged for such things as books, supplies, tools, uniforms, safety glasses, etc. A special per-credit fee is also charged for all Internet courses. In addition, a non-refundable activity fee is assessed on all credit classes. The fee is 5.5% of the current per-credit tuition rate.

Students who register for six or more credits per semester (3 or more credits for summer) will automatically be enrolled in student health services and have basic health care provided. This fee is assessed each semester and is non-refundable.

Full payment of tuition and fees is due at the time of registration. Fee payment options include cash, credit card, automatic payment plan and/or financial aid or agency authorization.

Financial Aid

Student financial aid provides funds to students who otherwise would be unable to meet the costs of postsecondary education. It is assumed that the primary responsibility for meeting educational costs lies with the family. Student financial aid is intended to assist only when the family is unable to meet the full cost of enrollment.

Financial Aid Checklist (also available at <http://www.cvtc.edu/financialaid>.)

Step One: Apply for Admission to a Program

Financial aid recipients must be accepted into a financial aid eligible program at CVTC to receive aid. Complete the admissions application at any time; however, the Free Application for Federal Student Aid (FAFSA) will not be processed until acceptance into a financial aid eligible program is received. The FAFSA may be completed while the Admissions application is in progress.

“Undeclared” program status does not qualify as an eligible program for financial aid consideration. Students who are unsure of their admission status should contact the Information & Service Center, 715-833-6200.

Financial aid is also not available for course audits, proficiency exams, or ineligible courses. A list of ineligible courses is available at <http://www.cvtc.edu/financialaid>.

Step Two: Apply for Financial Aid

The most important step in finding out if you are eligible to receive financial aid is to fill out the FAFSA. Many students who could receive financial assistance to attend college miss this opportunity because they don't complete the FAFSA.

Once the FAFSA is submitted, the Department of Education will send the student a Student Aid Report (SAR). The SAR outlines the information the student provided on the FAFSA and reports the Expected Family Contribution (EFC). This amount is then used to determine eligibility for federal student aid. The results are sent to the student and the schools listed on the application.

Step Three: Complete Documentation

The next step is to receive a letter from the CVTC Financial Aid Office requesting information that is required to determine the financial aid to which you are eligible. The Financial Aid Office may request the completion of one or more forms. Before aid can be determined, all forms and documents requested by the Financial Aid Office must be received.

Step Four: Receive Award Letter

Award letters are sent to eligible financial aid applicants. The letter indicates the types and amounts of financial aid for which a student is eligible.

Students will receive their award letter by the end of July for fall entry and by late November for spring entry if steps 1-3 above are completed by:

- early May for students entering the fall semester or
- early October for those entering the spring semester

Specific dates in May and October are identified on the College website under Pay for College. If the priority date is missed, a student's FAFSA application will still be accepted and processed, but it may not be processed in time for students to charge tuition, fees, and/or books to financial aid when registering for courses. Other payment options are available for students in this situation.

Step Five: Receive Financial Aid

Financial aid awarded funds are applied toward a student's unpaid balance first, which includes charges on the College's Payment Plan. If the credited aid exceeds the CVTC charges, the Cashier's Office will refund the student within ten (10) days of the applied credit. If the charges exceed the aid, the student must pay the balance.

The total loan award for the aid year is disbursed equally among the students' enrolled terms. Pell and SEOG funds are applied to student accounts the fifth week of the term.

Types of Financial Aid

Grant monies under normal circumstances do not need to be repaid. The following grants are awarded at Chippewa Valley Technical College:

Federal Grants

- **Pell Grant** is awarded to undergraduate students enrolled for a minimum of one (1) credit with high financial need based on the student's expected family contribution (EFC). The actual awards vary based on the number of enrolled credits.
- **Supplemental Educational Opportunity Grant (SEOG)** is awarded to undergraduate students enrolled for a minimum of one (1) credit with exceptional need based on the student's EFC.

Wisconsin State Grants

- **Wisconsin Higher Education Grant (WHEG)** is available to students who are Wisconsin residents and enrolled at least half-time. The grant is based on financial need.
- **Wisconsin Covenant Scholars Grant (WCSG)** program provides grants to Wisconsin High School graduates who signed a pledge in 8th grade and verified they meet the pledge requirements with their high school in their senior year.

Paying for College

- **Native American Grants** (WIA, BIA) are available through the Wisconsin Higher Educational Aids Board and the Bureau of Indian Affairs. The grant amount is based on need. In addition to completing a FAFSA, students must also complete a separate Indian Scholarship Application which is obtained from their tribal education office for the purpose of certifying the student's degree of Indian blood.
- **Minority Retention Grant Program (MINR)** is available to minority students who are Wisconsin residents in the second year of a two-year program, maintain a 2.0 grade point average, and meet the financial need criteria. Minority status is determined by the data on the College system and awarded after the school year has started
- **Talent Incentive Program (TIP)** is designed for first-time students who are economically and/or academically disadvantaged. Students who feel they may qualify for this additional funding may contact the Eau Claire office of the Wisconsin Educational Opportunity Center at 715-836-3171 for further information.
- **Hearing & Visually Handicapped Student Grant** is available to Wisconsin residents who are hearing impaired or visually handicapped and who also demonstrate financial need. Applications are available online at www.heab.state.wi.us/programs.html.
- **Wisconsin Academic Excellence Scholarship** recipients are chosen by their high schools as academic scholars. Students must be enrolled full time in associate degree programs and maintain a 3.0 grade point average.
- **Funds for Wisconsin Scholars (FFWS)** is a private charitable foundation that has been funded with a \$175 million founding gift from John P. and Tashia F. Morgridge. It provides grants to talented, lower-income graduates of Wisconsin public high schools attending a public college, university or technical college in Wisconsin. Students do not apply directly to FFWS for funding. Students should fill out the FAFSA to request financial aid, including FFWS grants. Funding is awarded through the University of Wisconsin System two and four year colleges and the Wisconsin Technical College System. Funds will be distributed through financial aid offices as part of their financial aid package. For more information visit: www.ffws.org.

Employment

Another type of financial aid is student employment. The **Federal Work Study Program** provides on-campus employment opportunities for qualified students based on financial need. Off-campus community service employment is also available.

Scholarships

Various scholarships are also offered by the Chippewa Valley Technical College Foundation. Application requirements vary by scholarship. A scholarship directory is available in mid-January each year. Private donor scholarship applications are made available to students as they are received.

Loans (to be repaid with interest)

Federal Direct Loans are offered by the U.S. Department of Education through the Federal Direct Student Loan Program (FDLP). An enrollment status of half-time is required for student loans.

- **Subsidized Direct Loans** are awarded on the basis of financial need. Interest is not charged until repayment begins or during authorized periods of deferment.
- **Unsubsidized Direct Loans** are NOT awarded on the basis of need. Interest is charged from the time the loan is disbursed until it is repaid in full. If interest is allowed to accrue (accumulate) while attending school or during other periods of nonpayment, it will be capitalized.

This means that interest will be added to the principal amount of your loan, and additional interest will be based on that higher amount.

- **Additional Unsubsidized Direct Loans** are NOT awarded on the basis of need. Those considered dependent students for financial aid purposes may be eligible for up to \$2,000 per school year. Those considered an independent student for financial aid purposes may be eligible for up to \$6,000 per school year. An independent student must meet one of the following criteria: turn 24 by December of the school year; be married; be a veteran of the U.S. Armed Forces; have children or dependents that receive more than one half of their support from the borrower; be an orphan or ward of the court; were in foster care after the age of 13; be an emancipated minor; be a minor in legal guardianship; or been verified as an unaccompanied youth who are homeless children or youth or are at risk of homelessness.
- **Federal Parent PLUS Loans** help parents and guardians with good credit borrow up to the cost of attendance for their undergraduate children. Repayment of a PLUS Loan begins 60 days after the full amount you've borrowed for a school year has been disbursed. Parents may request, through the Direct Loan Servicing Center, that repayment be delayed while their child is enrolled at least half-time and during the grace period.
- **Alternative student loans**, sometimes called private student loans, are loans a student takes out directly from lending institutions to assist with college related costs. They can be used for any education-related expenses including tuition, books, transportation and room and board. Approval is generally based on the student's credit and should be considered after all federal student loans, grants and scholarships have been exhausted. To receive an alternative loan you must complete the FAFSA, receive your CVTC award letter, and be registered for classes. The amount of the alternative loan is limited to the cost of attendance minus all other financial aid. By law, the lender requires the borrower to complete the Private Education Loan Applicant Self-Certification form.
- **Nursing Student Loan** - This loan is available to Wisconsin residents who are enrolled at least half-time at an eligible in-state institution that prepares them to be licensed as nurses, either RN or LPN. This loan is automatically given to selected students each year at CVTC; no application process is required. The Financial Aid Office notifies those who are eligible for this loan.

Financial Aid Satisfactory Academic Progress

Students must make satisfactory academic progress for each semester/term of enrollment in order to remain eligible for financial aid the following semester/term. Continued eligibility for financial aid is based on satisfactory progress standards of Chippewa Valley Technical College. These standards are available at <http://www.cvtc.edu/financialaid>.

Repayment

Students who receive Title IV federal financial aid and officially withdraw before more than 60 percent of the term has passed are required to repay a percentage of the federal financial aid received. The percentage is calculated from the number of days enrolled compared to the number of calendar days in the term.

Other Financial Resources

Other county, state, and federal agencies provide additional financial aid opportunities and support. Examples are identified on the College website at www.cvtc.edu/financialaid.

Credit for Prior Learning

Credit for prior learning is the granting of credits towards an associate degree or technical diploma program for knowledge and skills the student has previously mastered and which directly relate to the program curriculum. The attainment of these skills may be the result of prior work or volunteer experiences, military training or experience, or through courses completed at another accredited institution. Credit for prior learning may enable students to accelerate the completion of their educational goals.

A minimum number of program credits must be completed at CVTC. For specific credit requirements, see the College website.

Additional information, including costs, for each of the following credit for prior learning opportunities is available at <http://www.cvtc.edu/> transfer.

Advanced Placement (AP) Exam

Advanced Placement (AP) exams are administered by The College Board after a course of study in high school. In order for credit to be awarded, students must be admitted to a program at CVTC, an official score report must be sent to the Registration and Records Office, and the equivalent course must fulfill a graduation requirement. See the College website for AP exams and scores accepted by CVTC.

Apprenticeship Training

Apprentices who have completed a minimum of 400 hours of related instruction and obtained journey-level status are eligible for 32 credits of advanced standing to meet the occupational-specific course requirements of an Associate Degree in Technical Studies-Journeyworker. Contact the Counseling & Advising Center at 715-833-6346.

College-Level Examination Program (CLEP)

Another opportunity for demonstrating knowledge and mastery of competencies for select courses is available through CLEP exams. For credit to be awarded, students must be admitted to a program at CVTC, an official score report must be sent to the Registrar's Office, and the equivalent course must fulfill a graduation requirement. Locations where CLEP exams are offered may be found at <http://clep.collegeboard.org/students>.

College Transfer Credit

CVTC will award transfer credit for courses taken at other institutions of higher education. See the College website for transfer credit acceptance policies and procedures.

Experiential Learning/Challenge Exam

Credit may be granted for previous work experience, previous military education or experience, or other prior learning experiences. Skills and knowledge gained through experiential learning must relate directly to course competencies.

Experiential learning credit may be earned through documentation of competencies to be reviewed by faculty within the student's program area. Students may also need to complete a challenge exam if requested. A challenge exam is a practical/performance assessment that demonstrates proficiency in the course competencies. The exam is set up and administered by the instructor.

High School Agreements

Chippewa Valley Technical College offers opportunity for high school students to earn advanced standing transfer credit through articulated agreements with district high schools. Students who complete the approved secondary course/s with an A or B final grade qualify to claim advanced standing credit at CVTC without paying additional fees.

Proficiency Exams

CVTC offers proficiency exams in some content areas for students who may have already acquired the knowledge and skills that are the intended outcomes of a particular course. Successful completion of such exams results in the granting of credit for the course. A minimum 80% score is required to pass most exams.

Youth Apprenticeship

Students who complete youth apprenticeship instruction may receive advanced standing in related associate degree or technical diploma programs. More information on current agreements, is available on the College website.

Transfer of Credit to Other Colleges

Students wishing to continue their education at another institution should contact the college to which they wish to transfer. The receiving institutions will determine acceptable credit transfers. CVTC has transfer agreements in place with many four-year institutions.

Transfer of Credit to University of Wisconsin Colleges and Universities

Students enrolled at CVTC who wish to continue their education in the University of Wisconsin System may be eligible to transfer credits toward their bachelor's degree in the following ways:

- Students are eligible to transfer up to 30 credits of 100 level general education course work.
- Students who have successfully completed an associate degree may be eligible to transfer certain technical studies credits when there is a direct relationship between the associate degree program and the program offered at a UW System institution.
- Students transferring from CVTC may be eligible for credit by earning appropriate scores on national standardized examinations (e.g., College-Level Examination Program) or examinations developed by the UW System transferring institution.
- Students can take advantage of articulation agreements between CVTC and specific UW institutions for some programs.

Students may also go to the Transfer Information System (TIS) at www.uwsa.edu/tis. This website was developed by the University of Wisconsin System in cooperation with the Wisconsin Technical College System to help students understand their options and provide information about transferring credits and program between the two systems.

For more information about transfer opportunities, students should consult with their CVTC program counselor or the Admissions Office at a UW System institution.

Registration and Records

Registering for Courses

Students new to an associate degree or technical diploma program should first complete the steps listed in the Admissions section of this catalog. Once the admissions process is complete, students are notified by mail as to the date and time of program orientation, advisement, and registration. Registration occurs in late July/early August for the fall semester; in November/December for the spring semester; and in April for the summer session.

Returning students who have not taken classes for a semester or longer should contact the Admissions Office. They may need to be readmitted to the program.

For students not pursuing a degree or technical diploma, registration occurs 2-3 weeks prior to the start of the semester. Consult the College website for specific registration information.

Students are not considered to be officially enrolled and cannot attend classes or begin the coursework until all registration requirements have been completed, including payment of fees or making payment arrangements.

Auditing Classes

Students may audit most credit courses if they choose to attend and participate in class activities but do not want to receive credit or a grade. Auditors are not required to complete out-of-class assignments and examinations. However, fees and attendance requirements are identical to those of credit students. Audited courses may not be used to satisfy course prerequisites. Enrollment priority is given to fee-paying students who want to take the course for credit. Auditing students will not be allowed to enroll in a course until seven days prior to the start date of the term. Space must be available in the course and all course prerequisites, if any, must be met.

Current policies of external agencies do not allow financial aid or veterans benefits for audited courses. Non-credit and continuing education (CEU) courses, apprenticeship and clinical/internship classes may not be taken with audit status. Students who wish to change from credit status to audit status must do so before 75% of the total instruction of the course has been delivered.

Wisconsin Statutes permit Wisconsin residents 60 years of age or older to audit a course without paying tuition for the course. Eligible students will pay cost-based charges associated with the class. This includes activity fees, material fees and other miscellaneous fees. Contact the Information & Service Center at 715-833-6200 for more information.

Refund Policy

Refunds are processed according to the Wisconsin Technical College System Refund Policy for program, material, and on-line fees. Activity fees and other additional course fees are not subject to refund. Refunds are applicable only from the date the student formally drops a course or withdraws from the college.

A full refund will be given if the drop/cancel is done prior to the first day the class meets. The "first class" is defined as the first day the class meets and not the time of day a class meets. Students who decide to withdraw from a course should do so immediately, as a single day can make a difference in the amount of refund. Requests for refunds must be

received during the term of enrollment. Students registering for a course after the start date are subject to the refund policy guidelines as stated.

Students who cease to attend classes without officially withdrawing will not receive a refund. These students are responsible for payment of their assessed tuition and fees for the term.

Course attendance is a key factor in student success, and verification of such attendance ensures that the College is distributing financial aid to individuals who have begun to attend classes according to federal financial aid Title IV legislation. Verification of beginning attendance safeguards the College from financial aid overpayment and fraud. The College, therefore, defines "beginning attendance" as attending class or beginning the course by the end of the first week of a term. Students reported as not beginning the course are considered "no shows" and receive a refund of 80% of tuition and fees for any course from which they were canceled as a "no show." Federal financial aid recipients reported as a "no show" may owe a repayment to the College.

If the college cancels the course, the refund is 100%. If the college discontinues the course during the 80% refund period, the refund is 100% of all fees paid. After this period or after consumable materials have been issued to the student, the refund will be a proportionate amount of the total fees paid.

A student who drops one course and adds another during the first week of a term shall receive 100% credit for tuition and fees paid, provided this amount is applied toward the course added. If the fees for the course dropped exceed fees for the course added, refunds will be made according to the guidelines below.

- 100% before the class meets. The day the class meets and not the time of day defines the first class meeting
- 80% if less than 11% of the course's total potential hours of instruction have been completed.
- 60% if 11-20% of the course's total potential hours of instruction have been completed.
- zero after more than 20% of the course's total potential hours of instruction have been completed.

Appeal Procedure for Refunds. All student refunds are made in compliance with the Wisconsin Technical College System Refund Policy. Students who dispute refund decisions for extenuating circumstances may appeal by completing the Student Account and Refund Appeal form and attaching the appropriate documentation. The College refunds Appeals Committee meets routinely to review refund appeals. All decisions of the Appeals Committee are final

In certain situations the Financial Aid Office is required to return financial aid funds received by students to their source. Refund distribution, as prescribed by Federal Regulation, is made in the following order:

- Unsubsidized Federal Direct Loan
- Subsidized Federal Direct Loan
- Federal PLUS Loan
- Federal Pell Grant
- Federal Supplemental Educational Opportunity Grant (SEOG)
- Other Title IV programs

Registration and Records

Graduation Requirements

Students must complete all program requirements for graduation. Students monitor their progress through the College's on-line degree audit system. The Registrar's Office validates completion of requirements in a student's final semester. This is done upon receipt of a student's application for graduation. There is no graduation application fee.

Students must achieve a cumulative grade point average of at least 2.0 in order to graduate. In addition, some programs require a minimum grade of "C" in all classes. Check with a program counselor or program director to determine specific graduation requirements.

Student Rights to Records

The Family Educational Rights and Privacy Act of 1974 (FERPA) protects the privacy of educational records, establishes the rights of students to inspect and review their educational records, and provides guidelines for the correction of inaccurate or misleading data through informal and formal hearings. Students have the right to file complaints with the FERPA Office concerning alleged failure by the institution to comply with this act. Students have the right to the following:

- Inspect and review information contained in educational records.
- Challenge the contents of their educational record.
- Request a hearing of the outcome if the challenge is unsatisfactory.
- Submit an explanatory statement for inclusion in the educational record if the outcome of the hearing is unsatisfactory.
- Prevent disclosure with certain exceptions of personally identifiable information.
- Secure a copy of the institutional policy which includes the location of all educational records.
- File complaints with the Department of Health, Education and Welfare concerning alleged failures by institutions to comply with the Act.

All requests to review educational records must be made in writing to the Registrar.

In complying with FERPA guidelines, CVTC will release the following directory information without the consent of the student: name, address, email address, telephone number, date and place of birth, past and present classes enrolled in, major field of study, participation in officially recognized activities and sports, weight and height of athletic team members, dates of enrollment, degrees and awards received (including honors), and educational institutions attended, and other similar information as defined by the institution.

Students have the right to inform CVTC that any or all of the above information should not be released without their prior consent. Students who wish to do this must complete the necessary form revoking any or all of the public information listed. Forms are available at the Information & Service Center, Room 113, Eau Claire Business Education Center.

Students who have a financial "hold" on their record will not receive transcripts, grade reports, or be allowed to register for future classes until their financial obligations to the College have been met.

Student Identification Numbers

As of January 1, 2000, Wisconsin Act 128 limits the disclosure and release of student social security numbers. In order to comply with Act 128, CVTC assigns a unique identification number to each student. This identification number does not incorporate the student's social security number.

However, CVTC will continue to collect and report student social security numbers for state and federal reporting requirements and for financial aid purposes. CVTC procedures are designed to ensure that student social security numbers remain confidential.

Transcript of Academic Records

Academic records are kept on permanent file in the Registrar's Office, Business Education Center, 620 West Clairemont Avenue, Eau Claire, Wisconsin. All requests for transcripts must be submitted in writing, in person, by fax or by mail; **telephone and e-mail requests will not be accepted.** The current charge for transcripts is \$5 per transcript, or \$15 per transcript when service must be provided in 24 hours. Payment must accompany request or it will be returned. Financial obligations to the College must be cleared before an official transcript will be issued.

General Studies Transfer Courses

COURSE NUMBER	COURSE TITLE	CREDITS
Communications		
801-136	English Composition 1	3
801-195	Written Communications	3
801-196	Oral/Interpersonal Communications	3
801-197	Technical Reporting	3
801-198	Speech	3
Math		
804-106	Introduction to College Mathematics	3
804-113	College Technical Mathematics 1A	3
804-114	College Technical Mathematics 1B	2
804-115	College Technical Mathematics 1	5
804-116	College Technical Mathematics 2	4
804-118	Intermediate Algebra with Applications	4
804-123	Math with Business Applications	3
804-133	Math and Logic	3
804-189	Introductory Statistics	3
804-198	Calculus 1	4
Science		
806-114	General Biology	4
806-134	General Chemistry	4
806-143	College Physics 1	3
806-154	General Physics 1	4
806-177	General Anatomy and Physiology	4
806-179	Advanced Anatomy and Physiology	4
806-186	Introduction to Biochemistry	3
806-197	Microbiology	4
Social Science		
809-122	Introduction to American Government	3
809-128	Marriage and Family	3
809-166	Introduction to Ethics: Theory and Application	3
809-172	Race, Ethnic and Diversity	3
809-174	Social Problems	3
809-195	Economics	3
809-196	Introduction to Sociology	3
809-197	Contemporary American Society	3
Behavioral Science		
809-159	Abnormal Psychology	3
809-188	Developmental Psychology	3
809-198	Introduction to Psychology	3
809-199	Psychology of Human Relations	3

Associate Degree (AD) to Bachelor of Science (BS) Credit Transfer

CVTC Programs and Courses	Colleges & Universities																													
	CALU (Pennsylvania)	Capella University	Cardinal Stritch University	Concordia University	Ferris State Univ. (Michigan)	Franklin University	George Washington University	Globe University	Lakeland College	Mankato State University	Marian University	Minnesota State University	Montana State University	Rasmussen College	St. Mary's University	University of Cincinnati	University of Minnesota	University Phoenix	UW-Eau Claire	UW-Green Bay	UW-LaCrosse	UW-Madison	UW-Milwaukee	UW-Oshkosh	UW-Platteville	UW-River Falls	UW-Stevens Point	UW-Stout	Viterbo University	Winona State University
Admission to baccalaureate degree with earned associate degree from CVTC					★													★									★			
Check UW Transfer Information System	http://tis.uwspa.edu/resources/ga/wtcs/cvtc.shtml																													
Agriculture, Food & Natural Resources																														
Agriscience Technician							★					★																★		
Landscape, Plant & Turf Mgmt. - Horticulture																											★			
Architecture & Construction																														
Air Cond, Heating & Refrigeration Technology				★																										
Civil Engineering Technician								★																				★		
Business, Finance, and Marketing																														
Accounting		★	★	★			★	★						★														★	★	★
Administrative Professional							★	★																				★		
Business Management		★	★	★			★							★														★	★	
Human Resources		★												★																
Marketing Management		★	★	★			★	★						★														★		
Health Science																														
Clinical Lab Technician							★	★						★		★														
Dental Hygienist							★		★		★																			
Diagnostic Medical Sonography							★	★																						
Health Information Technology				★			★	★								★	★													
Nursing Programs - Associate Degree		★		★			★			★			★	★						★	★		★	★	★				★	★
Physical Therapist Assistant				★			★																							
Radiography							★	★						★							★									
Respiratory Therapist				★			★																							
Human Services																														
Alcohol and Other Drug Abuse Associate							★																						★	
Early Childhood Education																					★				★	★	★	★		
Information Technology																														
Information Tech - Network Specialist			★				★	★																					★	★
Information Tech - Programmer/Analyst			★				★																						★	★
Law, Public Safety, Corrections & Security																														
Criminal Justice - Law Enforcement				★			★			★			★													★	★	★	★	★
FireMedic																													★	
Paramedic Technician							★	★								★							★							
Paralegal	★						★	★																					★	
Liberal Arts																														
Liberal Arts-Associate of Science																				★							★	★		
Check UW Transfer Information System	http://tis.uwspa.edu/resources/ga/wtcs/cvtc.shtml																													
Manufacturing																														
ElectroMechanical Technology								★																						
Science, Technology, Engineering & Mathematics																														
Nanoscience Technology																													★	

Services for Students - Student Success

Steps to Success Program

We want you to succeed at CVTC. Sometimes that means we will reach out to students we think might need some support or academic assistance. It could also mean you need to take additional classes to get ready for college. We can provide support through four specific ways, all of which are part of the Steps to Success program: Inventory of Student Success, Prepared Learner, Early Alert, and First Semester Experience.

Inventory of Student Success

The Inventory of Student Success (ISS) is an attitudinal assessment completed by incoming CVTC students. Student responses indicate the level of confidence they feel about their ability to succeed in college. This information allows us to provide personalized interventions to help build students' confidence about their chances for academic and future success.

Prepared Learner Courses

Prepared Learner classes are designed to get students ready for a variety of college-level academics, including reading, writing, math, and science. Scores on the COMPASS® or ACT® assessments will tell us if you need to take one or more areas of these classes, which may be required for some General Education classes. Students must successfully complete each required Prepared Learner class with a C grade or better before registering for some General Education courses.

Early Alert

CVTC uses an Early Alert system to bring help to you quickly. When instructors have concerns about a student's attendance, academic performance, or behavior, they can send an Early Alert referral to CVTC's counselors. In it they'll identify what they have observed of their student and why they are concerned. Once an instructor sends a referral, someone from the Counseling & Advising Center will invite you in for a discussion with your program counselor. The goal is to review what's happening in your life and in your classes so we can figure out how we can help you get back on track—and find the success you deserve.

First Semester Experience

Adjusting to college life takes planning, support, and preparation. To help our incoming students succeed, we have developed First Semester Experience (FSE). CVTC students experience an orientation process that focuses on delivering important information in a way that suits your needs.

In addition, we have support services available to help you transition to CVTC:

- Intro to College Life
- Online Orientation
- Success Seminars
- Career Planning Workshop
- COMPASS® Prep Workshops

Academic Services

Academic Services is open during day and evening hours to all CVTC students and district residents at all CVTC campuses and outreach centers (summer hours vary by site). Qualified faculty and staff provide instruction and assistance in the following areas is available:

- General study skills
- Reading, math, and writing
- Homework assistance
- COMPASS® preparation
- GED®/HSED test preparation
- ELL/ESL classes
- Computer basics
- Career assessment
- Employment materials
- Peer Tutoring

For more information about specific services, please call your local Academic Services Center:

- Chippewa Falls (715) 738-3845
- Eau Claire (715) 833-6201
- Menomonie (715) 233-5344
- Neillsville (715) 743-3965 ext. 4
- River Falls (715) 426-8208

Services for Students - Student Success

Counseling and Advising Services

The Counseling and Advising Center is available to assist students to maximize their potential for educational and occupational success. Students are encouraged to consult with CVTC's Counseling and Advising Center Staff about academic, career and other college-related issues. Students can be assured of a confidential setting in which to explore their aspirations, abilities, interests, educational issues and other concerns they may have.

Student Support Assistants are available to guide students with the preliminary steps of entering college. From basic program questions to admission application and course registration, the Student Support Assistants can help students find answers; phone 715-833-6200.

Program Counselors are available to assist students in overcoming personal barriers to meeting their educational goals. Students in need of Career Planning guidance, or counseling related to personal or relationship challenges, are encouraged to make an appointment with a program counselor. Each of CVTC's Associate degree and Technical diploma programs is assigned a program counselor who is available to address students' questions and concerns. Counseling and Advisement appointments can be made at the Eau Claire campus by calling 715-833-6346.

Steps to Success is a program of student support and academic preparation options, designed specifically for CVTC students. Through entrance assessments, faculty observations, and a new First Semester Experience initiative, CVTC is striving to bring support services proactively to students who need them.

CVTC Steps to Success program includes the following components:

Steps to Success Program	Identifying Tool	Program Goal
Prepared Learner Courses	COMPASS® or ACT®	Improve students' academic skills, meet college-level reading, writing, math, and science.
Inventory of Student Success	Inventory of Student Success (ISS)	Increase students' confidence in their ability to learn and succeed in college.
Early Alert System	Instructor Referral	Review what's happening in the students' life and in their classes so we can figure out how we can help you get back on track – and find the success you deserve.
First Semester Experience	ISS	Provide a seamless transition to CVTC. Providing a semi-structured semester of support and timely information via online orientation, Intro to College Life and ISS Success Workshops.

COMPASS® Assessment

All CVTC programs require a COMPASS® pre-entry assessment, and many programs require minimum scores as an admission requirement. To schedule an appointment to take COMPASS®, visit the College website and make your own appointment or call 715-833-6200 for assistance in setting up an appointment. Assessment services are available at CVTC campuses in Eau Claire, Chippewa Falls, Menomonie, Neillsville, and River Falls. The cost of the assessment is \$20.00 and a fee of \$5.00 per test for retakes. A photo ID is required when testing.

The ACT® College entrance exam may be used in place of COMPASS®. Other assessments may also be accepted upon approval of the College's Assessment Center. In addition, individuals who have completed an Associate Degree or Bachelor's Degree may be exempt from this requirement. Verification of the completion of these options must be submitted to the College's Admissions Office.

Career Services

Use your experience and CVTC education to find the perfect employment opportunity. Services are available to current students and graduates. Whether you are on campus or off, we have access to it all right here for you!

Access Career Services:

- Part-time and full-time career opportunities are posted on CVTC's on-line career posting system, Wisconsin TechConnect. Go to www.cvtc.edu/careers.
- Contact the Career Services staff careerservices@cvtc.edu to register with Wisconsin TechConnect for your ID number and password.
- Graduates without Internet access may register with Career Services to receive notification of current job vacancies related to their training.
- Part-time career opportunities suitable for currently enrolled students are posted in the display case across the hall from the Information & Service Center.

Attend a Career Planning Workshop:

If you are unsure about program choice or have scored low on degree focus or degree choice, career planning workshops are available. You will learn:

- General Admission and Financial Aid application information
- How to match your interests and personality to careers
- How values play a role in career selection
- Labor market information – employment opportunities and salaries
- CVTC services available to help you succeed in a program

Career Planning Workshop registration information and schedule is located at www.cvtc.edu/careers.

To register for a Career Planning Workshop:

- At the Eau Claire Clairemont Campus call 715-833-6346 or stop by Counseling and Advising Center.
- At the River Falls Campus, career planning is available on an individual basis. Please contact 715-425-3301 to schedule an appointment.

Services for Students - Student Success

Diversity Services

Chippewa Valley Technical College welcomes, values, and respects differences and commonalities of all people. By valuing differences, we demonstrate our commitment to treating everyone with fairness and respect. There are a number of Diversity services and organizations available for CVTC students and members of the community.

We want to get to know you and share information about available services. Students are encouraged to visit Diversity Services located at the Eau Claire Business Education Center, contact the Diversity/Equal Opportunity Specialist by phone 715-833-6343, or Email mojibway2@cvtc.edu.



Diversity Advisory Council

The Diversity Advisory Council is open to CVTC faculty, staff, students and community members. A CVTC Diversity Taskforce was commissioned in May of 2001. The charge is to gather data and assess CVTC's current culture, as well as that of the surrounding communities, as a basis for developing strategies to advance diversity and

ensure equity, thereby increasing opportunities for success in a global community. The Diversity Advisory Council serves as a vehicle to encourage and monitor college progress on diversity-related issues.

Diversity Student Organization (DSO) Club

The CVTC Diversity Student Organization (DSO) represents students from ALL MAJORS who share time and experiences together to foster positive communication and relationships among students, staff, and the community. Membership is open to all CVTC students, staff, faculty, and community members who wish to contribute their ideas and support to diversity causes.

Nontraditional Services

Nontraditional Occupations (NTO) are defined as careers where fewer than 25% of the workforce are of one gender. Support and advocacy is available to assist NTO students.

Pride Alliance

The Pride Alliance Club provides social support, for LGBTQ students and their allies at the Chippewa Valley Technical College. Membership is open to all CVTC students, staff, faculty, and community members who wish to contribute their ideas and support to LGBTQ causes.

Multicultural Services

Multicultural Student Services provides leadership in creating a welcoming and engaging campus for students from ethnically and culturally diverse backgrounds so that they thrive and achieve their full potential.

Go For What You Want → Rau siab kom tau li lub siab xav → Logra lo que quieres

Your Key to Success → Txoj hau kev yuav pab kom koj mutau qhov zoo → Para un future mejor

The Diversity/Equal Opportunity Specialist works with multicultural students to help them successfully complete their training program by providing support and advocacy in the following areas:

- Program admission information
- Financial aid application assistance
- Registration
- Education and career planning
- Academic advising
- Tutorial assistance
- Scholarships
- Other referral services to meet individual needs

Disability Services

Reasonable accommodations are available for students with disabilities in accordance with Section 504 of the Vocational Rehabilitation Act and the Americans With Disabilities Act (ADA). CVTC buildings are accessible to people with physical or mobility disabilities. Educational accommodations include auxiliary aids, services, and assistive technology based on individual need.

Disability documentation requirements are not a part of the admissions process to the college and do not affect application to a program. Requests for accommodations should be made to the Disability Services Office located at the Eau Claire Business Education Center.

The phone number for Disability Services is 715-833-6234. Students are required to submit medical or other diagnostic testing information that verifies the current presence of a disability. Forms can be obtained from the Disability Services Office or on the website at www.cvtc.edu/disability. It is the responsibility of the student to provide the needed documentation prior to receiving accommodations.

Services for Students - Support Services

ESL/ELL

English as a Second Language (ESL) and English Language Learning (ELL) offers English language classes for adults over 18 who are legalized aliens, refugees, immigrants, or U.S. citizens.

Mastering English

(English as a Second Language)

This program helps non-English speakers to speak, read, and write English. Many students use these classes to help them prepare for citizenship or enrollment in CVTC programs.

Eligible students may enroll in these classes by visiting one of our CVTC campuses. Classes are offered in Eau Claire, Menomonie, and at several other campuses. For more information, call 715-833-6679.

Veterans Office

CVTC works in cooperation with state, federal and county veterans affairs offices to certify veterans and qualified dependents who wish to enroll at the College in an approved program. The certification process informs the Veterans Administration of a veteran's enrollment in the College, begin and end dates, and number of credits being taken. Certification must be completed for veterans to receive their monthly benefits.

For information and referral regarding educational benefits and the certification process, contact the College Veterans Office on the Clairemont Campus in Eau Claire by phone at 715-833-6272 or by email at dludwikowski@cvtc.edu. Additional information may also be found at www.cvtc.edu/veterans

Federal Benefits

Regulations for federal veteran benefits are found at www.gibill.va.gov.

State Benefits

Veterans should contact their county Veterans Service Office for application assistance and eligibility information on the Veterans Education Reimbursement Grant (VetEd) and Wisconsin G.I. Bill. County offices can also provide information on state benefits to veterans who did not participate in the Montgomery G.I. Bill or those who have



been separated from the military beyond ten years. More information can be found at www.dva.state.wi.us.

The college also processes National Guard Tuition Grant applications for active National Guard members.

Library

We encourage you to explore a variety of information resources that support your educational and professional needs at Chippewa Valley Technical College. Our library staff welcomes your questions and will assist in utilizing the large collection of materials, in all media formats, as well as the many public services available to our library users. Our commitment is to serving your information needs at all CVTC campus locations.

We welcome your suggestions and support as we continue to provide excellent service to CVTC faculty, staff, and students.

The Library is open Monday through Friday throughout the year, with Monday through Friday evening and Saturday hours during the fall and spring semesters. For more information on library services, please call 715-833-6285.

Bookstore

Visit our website at www.cvtc.edu under "Current Students" tab to obtain textbook pricing information, order books online, rentals, or see bookstore hours of operation. Textbooks are identified by course number. Please bring your schedule to purchase the correct books. 5.5 percent sales tax is not included in textbook prices.

Hours of operation:

- Monday through Thursday (7:30 AM to 7:00 PM)
- Friday (7:30 AM to 4:00 PM)

The Bookstore is located at the Eau Claire Business Education Center.

Online Orders

Textbooks and select merchandise may be ordered on www.efollett.com.

Textbook Return Policy (first week)

Textbooks may be returned for a full refund 1 week after the first day of class. Only books returned in original purchase condition will be refunded. Texts with software cannot be returned once the software seal has been broken. **Receipt MUST accompany all refunds.**

Used Book Buyback (end of semester)

The CVTC bookstore provides a source for students to sell their used textbooks through a used book buyback that is held the last week of each traditional semester. Advertising will be posted throughout the college for details.

1. If a textbook is being used for the upcoming semester and the CVTC bookstore needs additional stock, you will be paid 50 percent of the textbook selling price. Multiple book packages can only be accepted as a saleable complete package. Software must be returned with textbooks that were originally sold with software. Workbooks, non-bound materials, duplicated materials, and old editions are not eligible for buyback.

Services for Students - Resources

- Textbooks not needed by the CVTC bookstore may be bought at the bookstore by Follett's Higher Education Group at the national market value
- If a course is not offered for the upcoming semester, your book may not be eligible for buyback right away. However, the bookstore may buy the textbook during a future buyback if an upcoming course requires its use

Housing

CVTC offers a couple options to assist students in finding housing. Please contact the Student Life Office located at the Eau Claire Clairemont Campus Business Education Center if you have questions about either resource.

CVTC Public Website

The CVTC public website provides student rental listings by rental agencies and private parties, as well as links to classified ads in the local newspapers. www.cvtc.edu/housing

My CVTC Bulletin Board

Located in the My CVTC web portal is a virtual Bulletin Board where students can post both housing available and housing wanted information.

It is advisable to exercise the utmost discretion when looking for housing. CVTC provides the above resources to assist students; however interested students are responsible for arranging their own housing. CVTC does not conduct any background checks or other investigation of persons posting information on the My CVTC Bulletin Board, Student Rentals listing, or in the newspaper classified ads.

Parking

Parking permits are required for all CVTC campus parking lots. Students may purchase a permit at the Safety and Security office located in room 116 at the Eau Claire Business Education Center or at Gateway, Chippewa Falls, Menomonie, and River Falls campus offices.

A short-term visitor lot (30 minutes) for **guest parking only** is located on the east side of the building on University Drive at the Eau Claire Business Education Center. **Faculty, staff, full- and part-time students are prohibited from parking in the guest lots or visitor spaces.**

Gate-controlled parking is located on the east side of the building at the Eau Claire Business Education Center. The cost for parking in this lot is 75 cents per hour. A parking permit is **not** required for this lot.

Food Service

CVTC offers on-campus food service at the Business Education Center and Health Education Center. Vending machines are available at all campus locations

Health Services

CVTC has entered into agreements with UW Health Eau Claire Family Medicine Clinic and River Falls Medical Clinic to provide basic health care services to CVTC students who are registered for six (6) or more credits for the fall and spring semester or three (3) or more credits for the summer session. For information on services provided go to www.cvtc.edu/healthservices and click on Services. Students taking classes in Eau Claire or Chippewa Falls are automatically enrolled with UW Health Eau Claire Family Medicine Clinic. Students taking classes in River Falls are enrolled with River Falls Medical Clinic. Students taking classes only in Menomonie may enroll with either clinic by contacting staff at the Menomonie Campus Office. Student health service is not an insurance program.

An eligible student may receive service from the first day of the semester until the first day of the following semester or term. There is a cost for this service. The CVTC Student Government will pay a portion of this cost for each student from the student activity fees. Students will be assessed their portion at the time of registration. Fees are listed on the CVTC website.

Student family members are not eligible for student health services; but can be seen at either clinic and be billed for services rendered. If an insurance carrier is available, the clinics will bill the insurance company for the family member's services or for the student's services not included in the basic services.

Services for Students - Activities & Student Life

Student Life Office

The Student Life Office is located at the Eau Claire Business Education Center. Questions regarding the following activities can be directed to a Student Government representative or to the Student Life staff by calling (715) 833-6267.

Clubs and Organizations

There are numerous student clubs and organizations at CVTC relating mainly to academic programs and careers. Contact a program instructor or the Student Life Office for information on any of the following:

- Administrative Professionals Club
- ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers
- Auto Body Club
- Automotive Club
- Barber/Cosmetology Club
- BPA - Business Professionals of America
- CLT - Clinical Laboratory Technician Club (Alpha & Lambda)
- CNC Club - Computer Numerical Control
- Collegiate DECA
- Criminal Justice/Law Enforcement Club
- Diesel Club
- DMS Club - Diagnostic Medical Sonography
- DSO - Diversity Student Organization
- Electromechanical Club
- Environmental, Refrigeration Technician Club
- EPD Club, Electrical Power Distribution
- Fire/Medic Club
- HIT - Health Information Technology Club
- Horticulture Club
- Imagers (Radiography)
- Industrial Mechanics
- IT Club - Information Technology
- JAM - Japanese Anime & Manga Club
- KIDS Child Care and Early Childhood Club
- Nanoscience Club
- Nurse's Club
- Paralegal Club
- Paramedic Club
- PAS - Postsecondary Ag Students
- Pharmacy Technician Club
- Phi Theta Kappa
- Physical Therapist's Club
- Pride Alliance Club
- RC Club - Respiratory Care
- Residential Construction Club
- SADHA - Student American Dental Hygienists' Association
- SkillsUSA Club
- SME - Society of Manufacturing Engineers-Student Chapter 172
- Structural Drafting Club
- Student Impact
- Veterans Club
- Welding Club

Student Government

The Student Government is the voice of CVTC students. Student Government functions include representing students on college committees, working on legislative activity, allocating financial support to clubs, providing cultural and social activities such as leadership, recognition, and educational programs.

Student Government is comprised of an executive board, campus representatives and club representatives. All students are welcome to attend meetings. Contact Student Life for more information.

E-Notes

CVTC's electronic newsletter, which communicates CVTC news. E-notes is sent to all students via CVTC Email accounts. E-Notes, contact can be found on the CVTC website at www.cvtc.edu/studentlife.

Lockers

Payment of a nonrefundable, nontransferable \$5.00 fee at the Student Life Office entitles you sole use of a locker at the Eau Claire Business Education Center or Health Education Center through date specified on the application. Locker availability, due to maintenance, may be limited during May and June. For details on locker availability at campuses other than the Business Education Center, contact on-site office personnel.

Student ID Cards

Photo identification cards are available at the Student Life Office. An ID is supplied free of charge to a new student taking credit classes and supplying an official class schedule or payment receipt showing student ID number and name; or to a student supplying an expired CVTC ID and a current semester schedule. Others will be assessed a \$5.00 fee. Student IDs are used as your library card and for community discounts.

Graduation

Graduation exercises are scheduled for May, July, and December of each year. Information pertaining to the ceremonies can be found at www.cvtc.edu/graduation.

UWEC Recreation

Semester passes for the use of UWEC McPhee recreational facilities may be purchased at the CVTC Cashier's Office. For current prices and hours of usage, contact the Student Life Office.

State Ambassador Program

Each year a Student District Ambassador is selected from each of the 16 technical college districts. Our student ambassador helps the district promote technical college education.

Services for Students - Technology Support

Help Desk

CVTC has a technology Help Desk that is available to our students 24 hours a day, 7 days a week. The Help Desk offers computer-related support by serving as a first point-of-contact when a problem or question arises. An online version of the Help Desk exists within My CVTC where you can find documentation and video tutorials on a wide range of technology topics.

E-Learning Support

CVTC provides e-learning support for students who need help with using Blackboard, My CVTC, student Email, and Citrix.

Student Email and My CVTC

My CVTC is the College's web portal. Each student at CVTC is provided with a My CVTC Email account. It is important to check this account regularly as this is the primary mode of communication used by your teachers and the college. My CVTC allows students access to information and web-based software such as:

- Email
- Grades
- Student Information System (SIS)
- Blackboard
- Course Registration
- My CVTC Software
- College Announcements

Blackboard

Blackboard is CVTC's course management system. Using Blackboard, you can access course materials, submit assignments, participate in discussion forums, and take tests and quizzes.

Help Central

CVTC technology concerns? Need some help?

Each semester the Information Technology department, in partnership with Student Services and Curriculum and Professional Development, provides assistance at various campus locations called HELP Central. HELP Central is a one-stop-shop for assistance with the following technologies:

- My CVTC account set-up
- Student Email access
- Blackboard
- Wireless and network access
- And more

HELP Central is available during the opening days of each term; times and campus locations are posted around the college and on the My CVTC website. Students are encouraged to visit HELP Central for one-on-one assistance from trained CVTC staff.



Technology Help Center

The Technology Help Center is a website that contains documentation about the most commonly used software applications at CVTC as well as a collection of other useful guides and tutorials.

Academic Services

The department of Academic Services can help you with your technology questions. From Blackboard to Microsoft Office Suite, the faculty and staff can work with you to improve your ability to use technology at CVTC. Academic Services centers are located on every campus. Stop by and let us help you with your technology questions.

2009-2010 Graduate Follow-Up Study

Program #	Program Name	Graduates	Respondents	Employed - Related	Employed - Unrelated Field	Seeking Employment	Continuing Education Not in Labor Market	Not in Labor Market	Average Hourly \$	Average Monthly \$
10-101-1	Accounting	37	31	15	8	4	3	1	14.23	2448.99
10-106-6	Administrative Professional	21	17	12	2	1	1	1	14.67	2542.55
10-006-3	Agriscience Technician*	7	7	6	0	0	1	0	11.73	2932.00
10-601-1	AC, Heating, and Refrigeration Technician	3	2	2	0	0	0	0	11.61	2263.99
10-550-1	Alcohol & Other Drug Abuse Associate	16	15	10	1	1	2	1	13.09	2187.05
31-405-1	Auto Collision Repair/Refinish Technician	20	18	7	4	2	3	2	13.51	2399.79
31-404-3	Automotive Maintenance Technician	40	24	8	2	2	10	2	11.91	2109.19
31-502-1	Barber-Cosmetologist*	16	11	11	0	0	0	0	10.11	1450.20
10-102-3	Business Management	65	45	18	8	6	13	0	13.21	2486.52
30-534-1	Central Service Technician	10	10	5	3	0	1	1	11.41	1978.16
31-307-1	Child Care Services*	14	9	7	0	0	2	0	8.39	1435.74
10-607-5	Civil Engineering Technician - Structural	12	11	8	0	1	2	0	15.66	2830.69
10-513-1	Clinical Laboratory Technician	20	20	19	0	1	0	0	16.26	2738.46
10-504-1	Criminal Justice - Law Enforcement	45	25	12	8	1	4	0	13.91	2696.99
30-504-1	Criminal Justice - Law Enforcement Academy	66	28	19	5	3	1	0	18.24	3034.96
30-508-2	Dental Assistant	26	21	19	1	1	0	0	13.04	2156.73
10-508-1	Dental Hygienist	12	12	9	0	3	0	0	24.86	2283.57
10-526-2	Diagnostic Medical Sonography	27	18	12	2	4	0	0	27.60	4505.07
32-412-1	Diesel/Heavy Equipment Technician	8	6	6	0	0	0	0	16.09	3207.78
10-307-1	Early Childhood Education	19	13	9	2	0	2	0	8.31	1488.35
31-413-2	Electrical Power Distribution	29	17	9	6	0	1	1	16.27	3067.17
10-620-1	Electromechanical Technology	11	9	8	0	1	0	0	15.97	3018.44
31-531-1	Emergency Medical Technician - Paramedic Adv	7	7	6	0	1	0	0	17.36	3535.73
30-090-1	Farm Business and Production Management	0	0	0	0	0	0	0	n/a	n/a
10-531-2	FireMedic	0	0	0	0	0	0	0	n/a	n/a
10-530-1	Health Information Technology	18	16	12	3	1	0	0	13.14	2244.99
10-109-2	Hotel and Restaurant Management	8	7	3	3	0	1	0	10.13	1682.65
31-462-2	Industrial Mechanic	14	14	13	1	0	0	0	15.85	2986.82
10-150-2	IT - Network Specialist	32	27	19	4	2	2	0	14.61	2644.91
10-152-1	IT - Programmer/Analyst	22	16	11	0	0	4	1	16.05	2812.17
10-825-1	Individualized Tech Studies	1	1	1	0	0	0	0	19.23	3333.33
10-001-1	Landscape, Plant & Turf Management-Horticulture	6	6	5	0	1	0	0	11.94	2241.33
32-420-5	Machine Tooling Technics	21	20	15	1	1	3	0	16.34	3140.11
10-104-3	Marketing*	33	13	7	2	0	4	0	12.51	2368.90
31-509-1	Medical Assistant	37	33	21	4	3	2	3	13.31	2102.01
31-461-2	Motorcycle, Marine & Outdoor Power Products	12	11	8	0	0	2	1	11.95	2123.71

2009-2010 Graduate Follow-Up Study, Continued

Program #	Program Name	Graduates	Respondents	Employed - Related	Employed - Unrelated	Seeking Employment	Continuing Education Not in Labor Market	Not in Labor Market	Average Hourly Wage	Average Monthly Wage
10-635-1	Nanoscience Technology	9	2	0	0	1	1	0	n/a	n/a
10-543-1	Nursing - Associate Degree	178	126	112	2	4	4	4	24.72	3938.19
10-110-1	Paralegal*	16	10	7	2	1	0	0	12.99	2111.13
10-531-1	Paramedic Technician	4	4	4	0	0	0	0	18.01	2964.64
31-536-1	Pharmacy Technician	13	12	9	1	0	2	0	10.68	1635.27
10-524-1	Physical Therapist Assistant	12	10	9	1	0	0	0	17.88	2943.84
10-526-1	Radiography	20	20	13	3	3	1	0	20.01	3326.70
31-401-1	Refrigeration/AC/Heating Service Technician	16	11	8	2	0	1	0	17.22	3294.67
31-517-1	Renal Dialysis Technician	8	8	4	4	0	0	0	12.70	2201.16
10-515-1	Respiratory Therapist	9	9	9	0	0	0	0	23.71	3629.36
10-196-1	Supervisory Management	22	8	4	0	1	3	0	18.50	3068.79
31-512-1	Surgical Technologist	8	7	5	1	0	0	1	16.77	2907.15
10-499-5	Tech Studies-Journeyworker	1	1	0	0	0	0	0	30.00	5199.60
30-458-1	Truck Driving	74	35	17	6	11	0	1	15.40	3439.39
31-442-1	Welding	18	18	13	2	2	0	1	16.23	3170.73
31-410-2	Wood Technics	26	21	15	2	1	2	1	13.08	2304.75

*Graduates from these programs may receive tips, commissions, live-in provisions, or annual bonuses not reflected in reported salaries.

2009-2010 Graduate Follow-Up Study Summary

Graduates	1,245
Respondents	904
Employed - Related.....	603
Employed - Unrelated.....	98
Not in Labor Market - Student.....	85
Not in Labor Market - Other.....	52
Seeking Employment.....	66

Employment Overall

Employed	91%
Employed in field related to training	86%

Glossary of Terms

This glossary contains some of the most commonly used terms at Chippewa Valley Technical College.

ACT[®] - College entrance exam that assesses student's general education development and their ability to complete college-level work.

Accepted Admission (AA) - The status of an applicant who has met all requirements for program entry and who has a reserved place in the program core courses.

Associate Degree - Applied Science or Applied Arts degree consisting of 60-70 credits designed to provide a person with the attitudes, knowledge, and skills necessary to function at a technician or mid-management level.

Audit - Register and pay for a class but without the obligation of completing course work or tests. Auditors do not receive grades or credits for the course.

Automatic Payment Plan - A method to pay for tuition and fees in installments throughout the enrolled semester.

Blackboard - A course management tool which is a user-friendly, secure website where students access course materials, participate in online discussions, and complete tests and assignments.

Cashier Connection - A secure online service for students to view and pay tuition and fees, enroll in an automatic payment plan, setup electronic refunds and to provide access to authorized users.

Certificate:

- **Achievement Credential (AC)** - Consists of one or more courses which may prepare students to enter CVTC training programs or gain knowledge in a particular area.
- **Technical Certificate (TC)** - Consists of several related courses which prepare a student for an entry-level job or a job upgrade.

Challenge Exam - A practical/performance assessment in which a student demonstrates proficiency in the competencies of a course through mastery of technical skills.

Co-requisite - a course that must be taken at the same time as another course.

COMPASS[®] - An untimed computerized assessment of math, reading, and writing skills of students entering any CVTC program.

Core Courses - Required classes specific to a particular degree program. Many core courses are available only to those accepted to the program after having applied for admissions to the college. Core courses are also referred to as "major courses."

Credit - Unit of recognition for scholastic work awarded when a course is successfully completed. Courses can be worth 1, 2, 3, or more credits.

E-Learning - CVTC E-Learning options provide flexibility through online, hybrid delivery, or web conferencing of courses in instructional programs. Courses are taught using Blackboard, a user-friendly secure website where you access course materials, participate in online discussions, and complete tests and assignments.

- **Online Course** - 100% of learning is online (some classes require proctored exams). Interact with the instructor and fellow classmates via Blackboard, a "virtual classroom".
- **Hybrid Course** - Typically one half of course is online and one half is in a classroom or lab. Active and independent learning is promoted. Time on campus is reduced.
- **Web Conferencing** - Course instruction is conducted with the use of Microsoft Live Meeting, which is an online collaboration (web conferencing) tool that instructors use to present course materials.

Elective - A course which the student selects from a group of alternative courses.

Financial Aid - Financial assistance in the form of grants, loans, and work-study assistance which helps defray educational expenses.

Full-time Student - Enrolled in at least 12 credits each 16-week term or enrolled in 6 credits in the summer session.

General College Courses - A series of courses designed to improve students' skills prior to enrolling in general education classes. Pre-entry assessment scores will place students in general college courses.

Internet Protocol (IP) video - Two-way interactive audio, video E-Learning courses delivered via Internet.

In-Process Admission - The status of an applicant who has not yet met all the requirements for program entry.

Internship - A practical experience designed to give students supervised experience in their field during their final semester. (NOTE: Not all programs include internships.)

Multiple-Entry Programs - Programs which have four or more starting times throughout the year.

My CVTC - This is a one-stop web center for students to access information and tools they need throughout their educational career at CVTC. My CVTC gives students access to their Email, Blackboard, SIS, College Announcements, Library, forms, and much more. All students who take credit, online or basic skills courses are automatically assigned a My CVTC account.

No Show - Students who never attend the class(es) for which they are registered nor have ever made the required contact with the instructor of the course will be cancelled from the class(es). The method of delivery (traditional classroom, open lab, online, hybrid, etc.) will determine the point in the term when the student is considered "No Show."

Noncredit Course - A course for which no program credit or grade is awarded; usually a course taken only for enrichment, improved job performance, or career exploration purposes.

Glossary of Terms

Part-time Student - A student enrolled for 11 or fewer credits each 16-week term.

Pre - or concurrent - A course that can be taken in a previous term or at the same time as another course as indicated in the course description.

Pre-program Student - A student admitted to the college that may not enroll in major core courses due to the program capacity being full or because the student needs to complete specific academic requirements prior to being eligible for the program core courses. Pre-program students in health programs may not enroll in program core courses.

Prepared Learner Courses - These courses represent a category of classes designed to help CVTC students prepare for the academic demands of General Education courses.

Prerequisite - A course that is required before another course can be taken.

Proficiency Test - A written and/or hands-on examination designed to allow a student to test out of a course if he or she can demonstrate sufficient mastery of the subject matter.

Required Course - A class which a student must successfully complete in order to graduate from a program.

Semester - A 16-week period of instruction (for example, August to December, January to May). Most classes at the college are a semester in length.

Summer Session - An 8-week period (June through July) when a limited number of classes are offered at the college.

Technical Diploma - A combination of courses totaling 2 to 68 credits which are designed to provide a person with the knowledge, attitude, and skills necessary to function as an entry-level technician.

Transcript - A permanent, official listing of a student's courses and grades from an educational institution.

Transfer Credit - Credit for work accomplished at one postsecondary institution (for example, a university, technical college, or the military) which is accepted by another postsecondary institution.

Undeclared Student - A student who does not indicate a program major on the admissions application or who has not met the requirements for classification as a regular or pre-program student. Undeclared students are not eligible for financial aid.

Waiting List - Comprised of students who have met all application requirements for program entry but are on "stand-by" because the program core courses are filled.

Withdrawal - The process of formally dropping all classes after the term has begun but before the withdrawal deadline.

Clairemont Campus

620 W. Clairemont Ave., Eau Claire, WI 54701

**Entrances
 for Business
 Education
 Center are**
 Numbered
 in squares.
 example: 4A

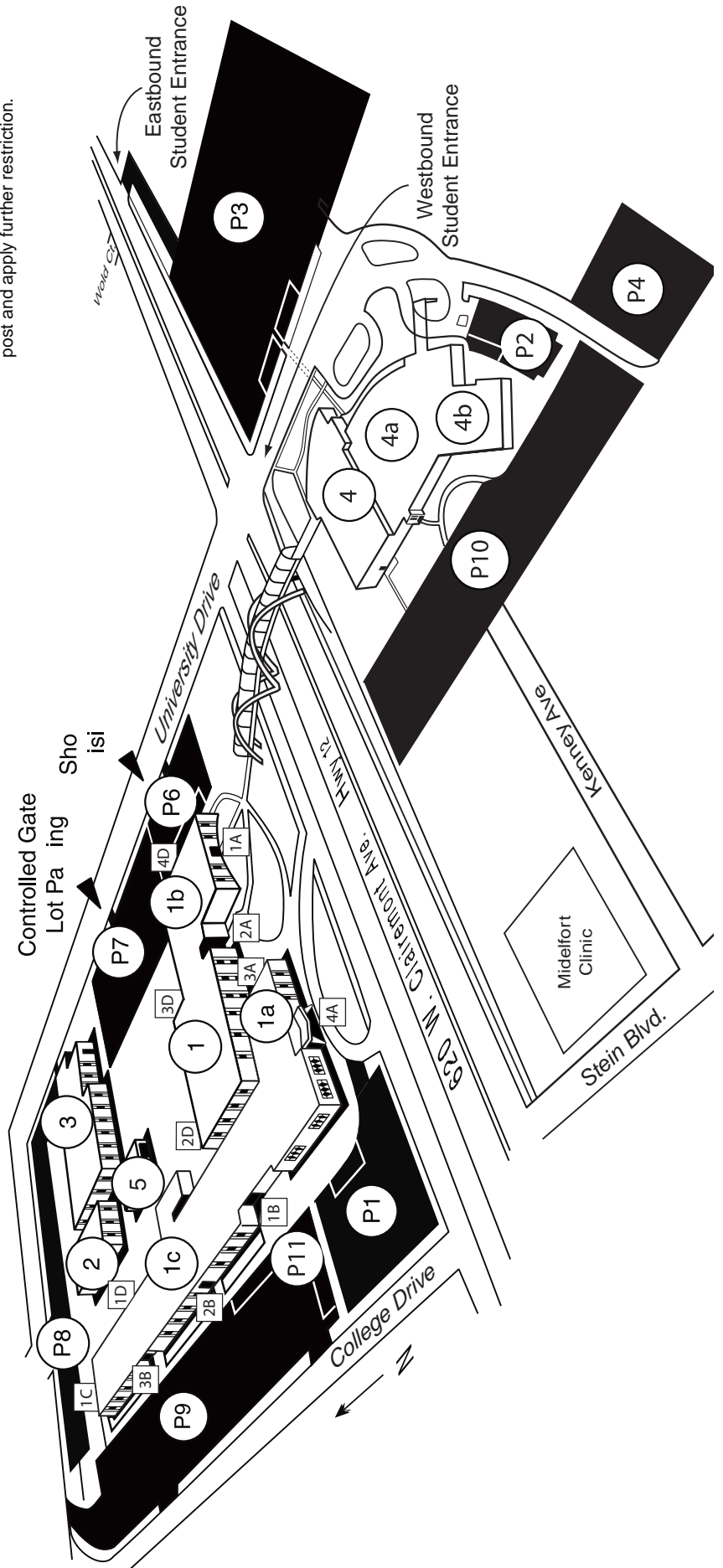
BUILDINGS

- 1 Business Education Center
- 1a Administration
- 1b Info & Service Center
- 1c North Hall
- 2 West Annex
- 3 East Annex
- 4 Health Education Center
- 4a Dental Clinic
- 4b Eau Claire Family Medicine
- 5 Warehouse

PARKING

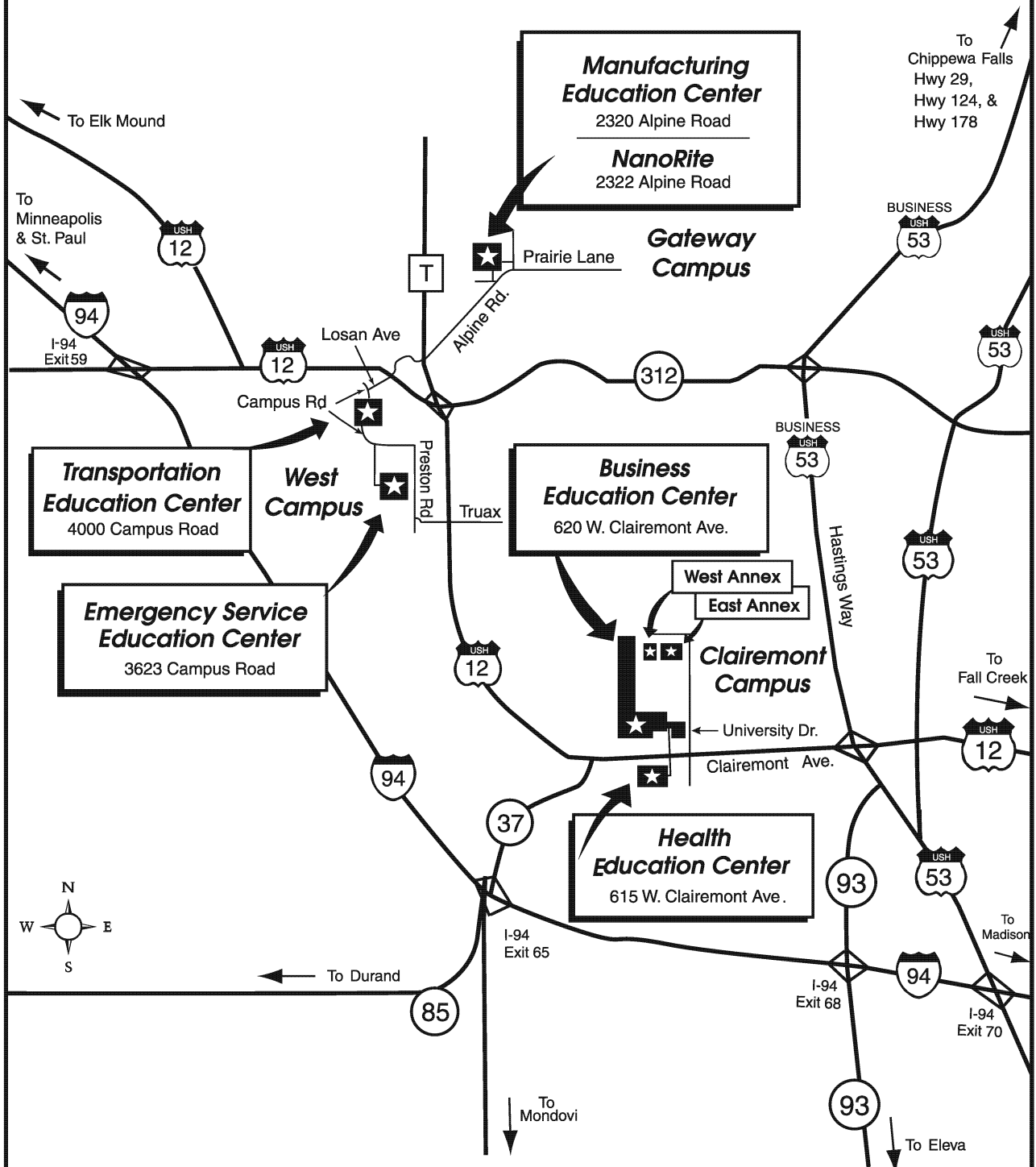
- P1 RCU Visitors/Board
- P2 Eau Claire Family Medicine Patient Parking
- P3 Student
- P4 Student
- P6 Short-Term Visitor Lot
- P7 Pay-Per-Hour Gate Lot
- P8 Staff
- P9 Staff
- P10 Staff
- P11, P1, P6, P2, P3 Disabled

The college reserves the right to post and apply further restriction.



How to get to Chippewa Valley Technical College

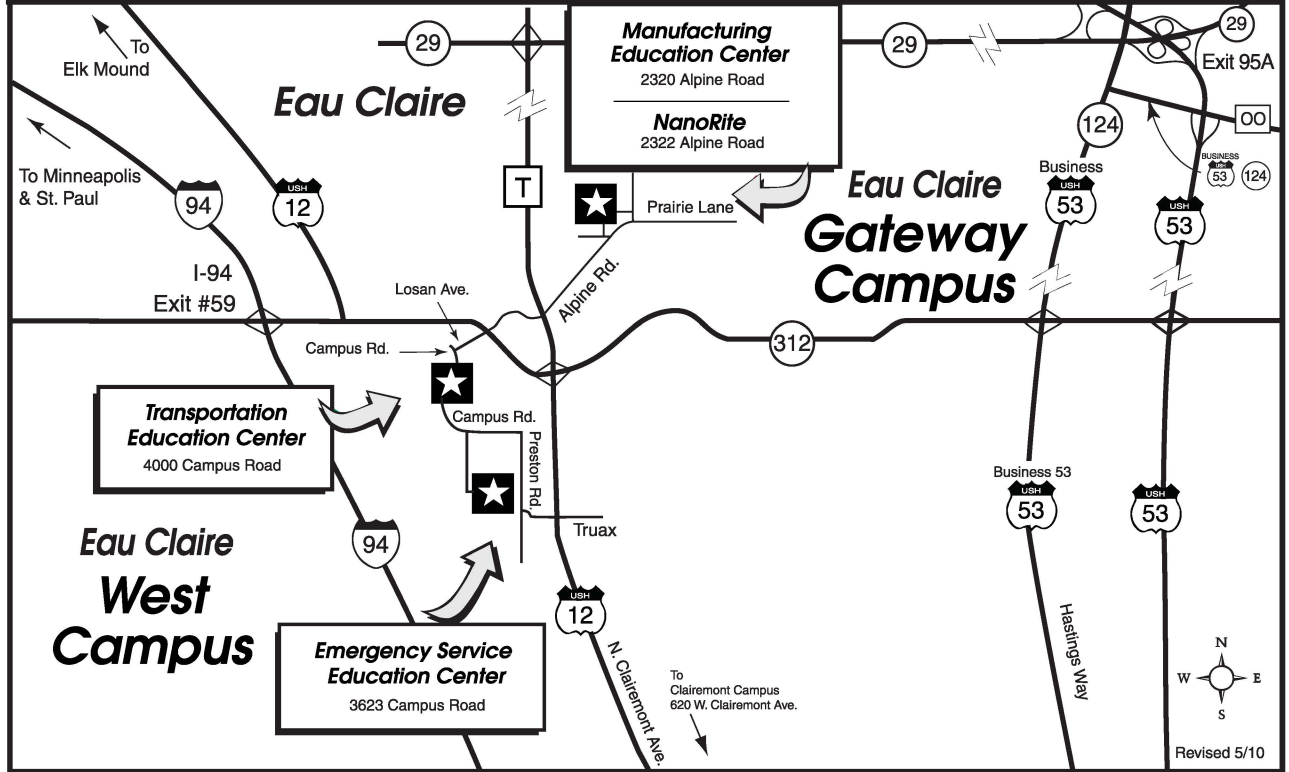
Clairemont Campus, West Campus, & Gateway Campus



Revised
5/11

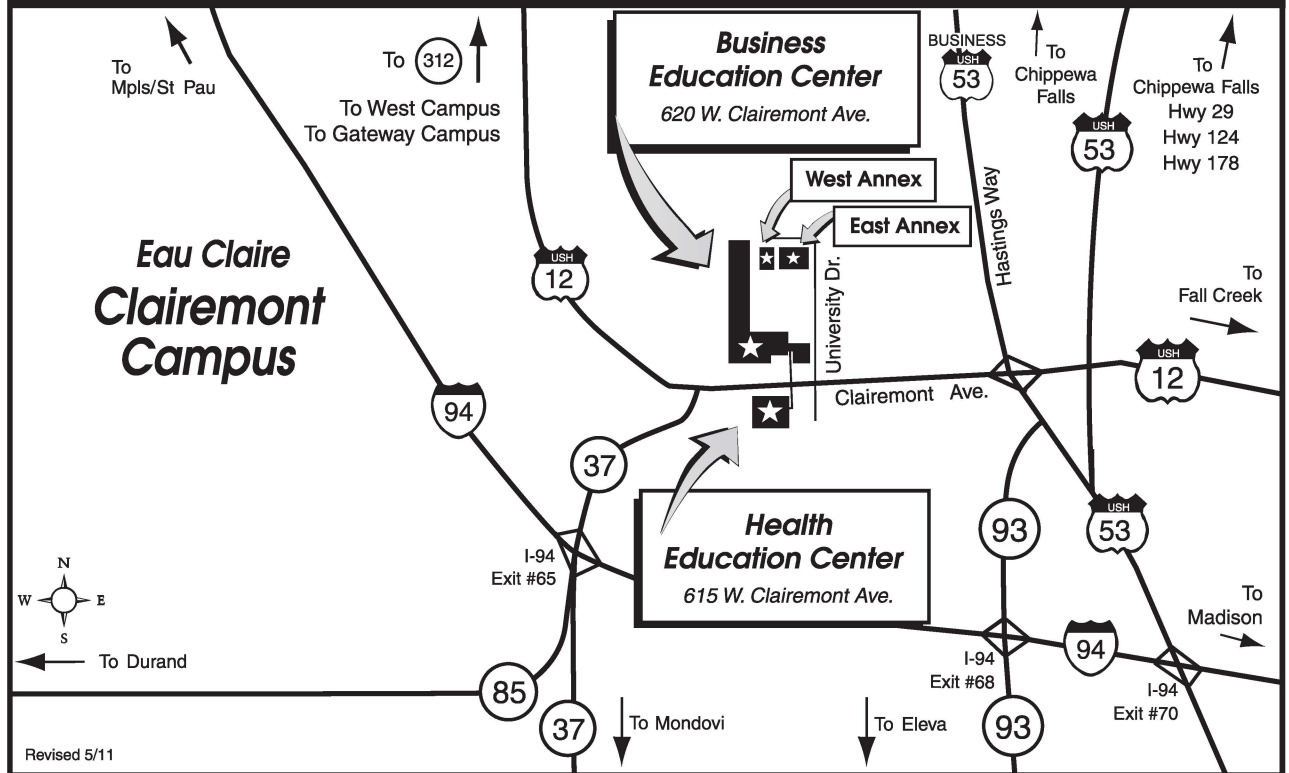
Go to www.cvtc.edu for written driving directions.

How to get to Chippewa Valley Technical College



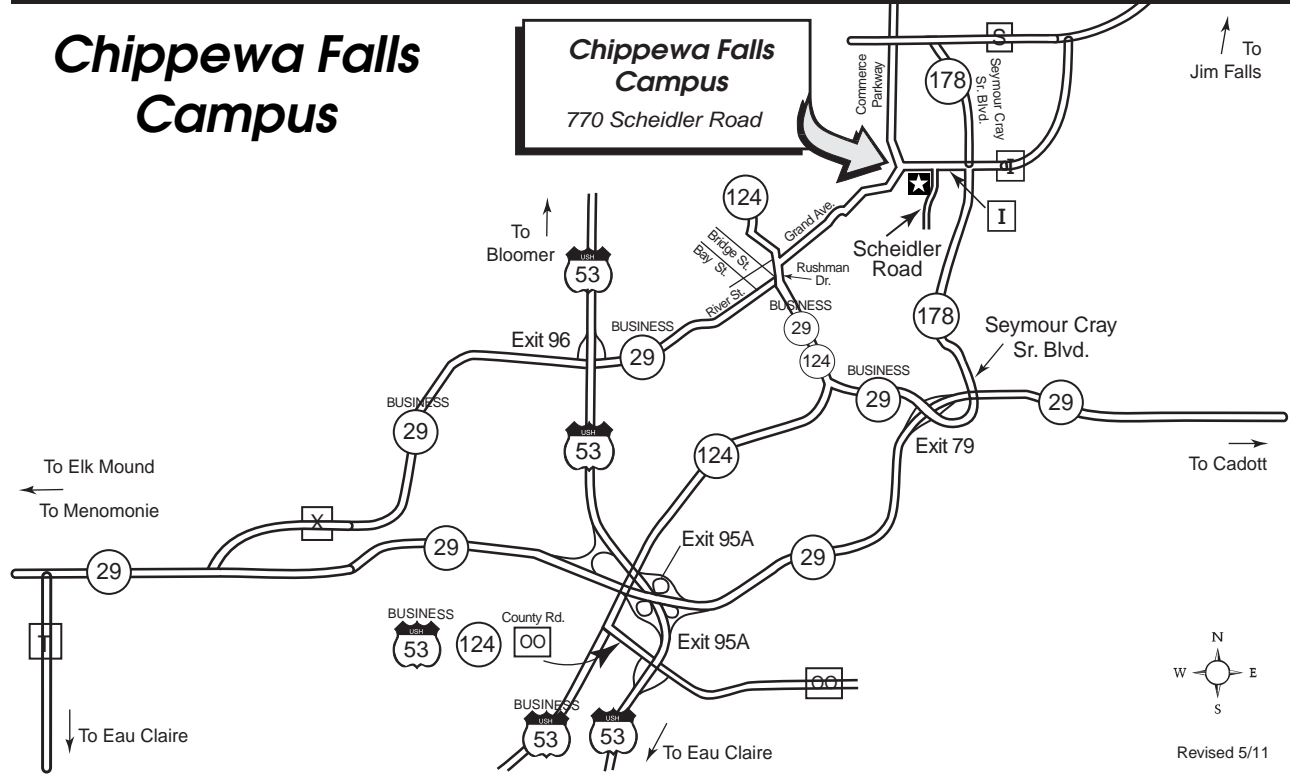
Go to www.cvtc.edu for written driving directions.

How to get to Chippewa Valley Technical College



How to get to Chippewa Valley Technical College

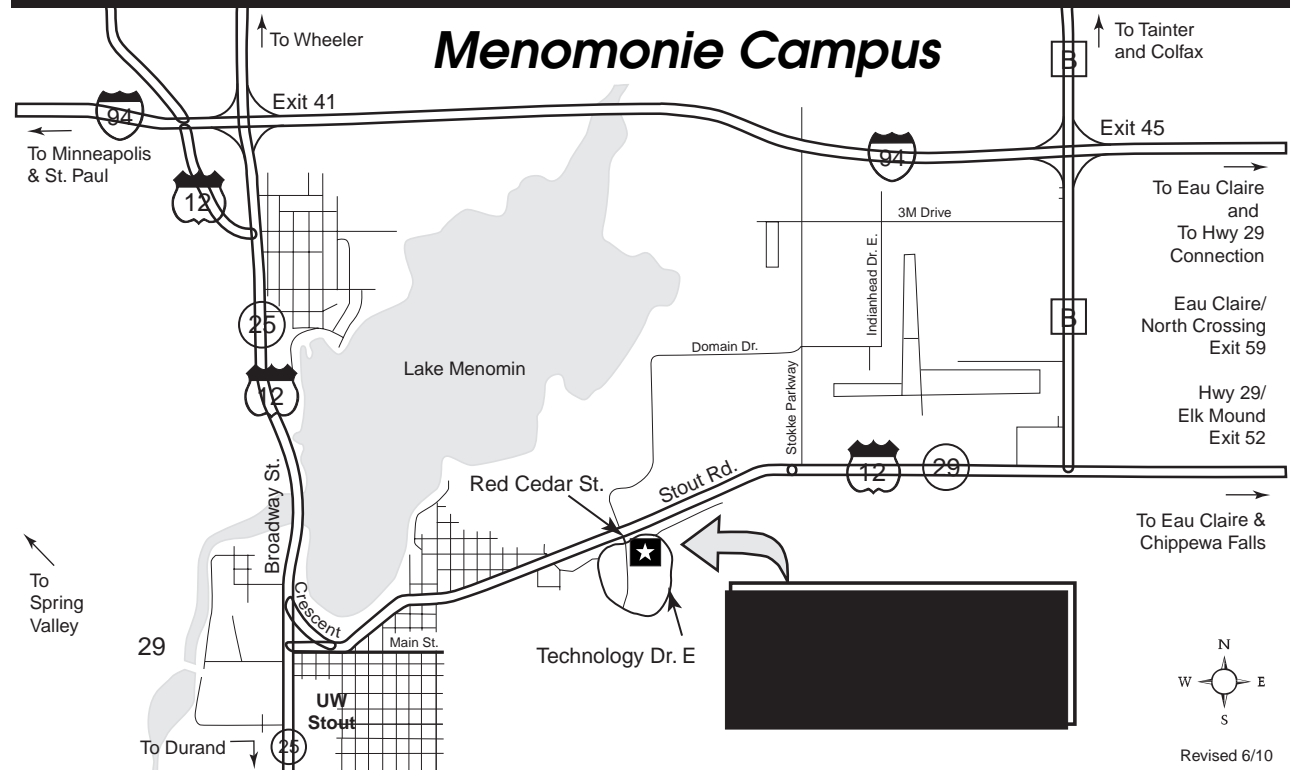
Chippewa Falls Campus



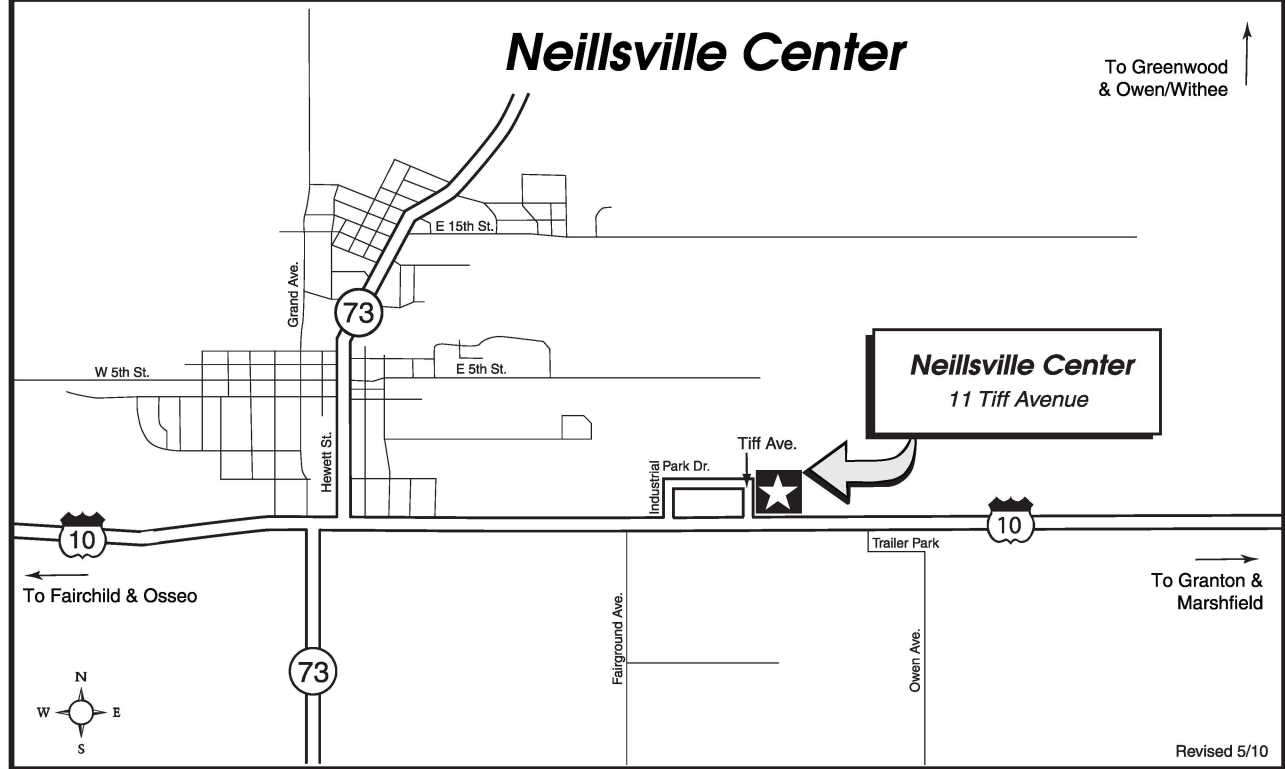
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How to get to Chippewa Valley Technical College

Menomonie Campus

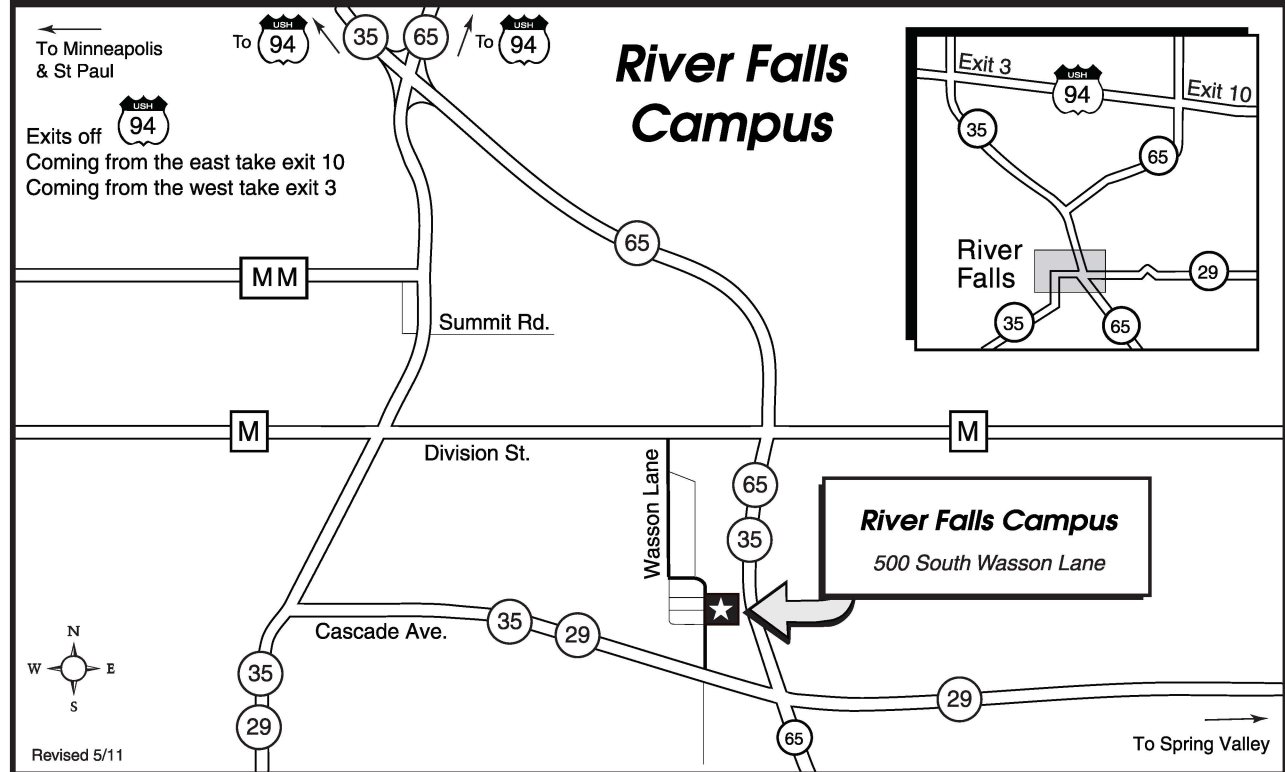


How to get to Chippewa Valley Technical College



Go to www.cvtc.edu for written driving directions.

How to get to Chippewa Valley Technical College



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