YOUTH OPTIONS COURSE GUIDE

2017-18

This course guide is not to be considered in any way a contractual document between Fox Valley Technical College and the student. Administration reserves the right to change curricula, regulations, and course offerings as published in this course guide during the period of any student's attendance. Any changes made will be in accordance with policies, rules, and regulations as established by the Wisconsin Technical College System (WTCS) Board and will be based upon the changing needs of the occupational areas involved. **Not all courses listed in this course guide are scheduled every semester.**

Contents

Introduction

Youth Options (YO) at Fox Valley Technical College is a program designed to introduce high school students to the world of higher education. In addition to getting a first-hand view of the college experience, students who successfully complete their YO courses earn college credit for their effort. These credits may be applied toward a degree at Fox Valley Technical College, or at many other colleges in Wisconsin.

In conjunction with their high school counselor, approved YO students select courses from the YO Course Guide. They attend a mandatory YO registration session and register for classes just like all other college students. YO students are impacted by the same benefits, requirements, and restrictions as all other students attending the college. They must be aware of and comply with college attendance, grading (per the class syllabus), and refund policies. They are limited to a total of 18 credits completed within the Youth Options program but enjoy great flexibility in selecting courses from the YO Course Guide (not all courses in the YO Course Guide are offered every semester).

While YO courses are pre-approved by Fox Valley Technical College and a student's own high school, there are no classes that are held open strictly for YO students. Because of this, it is important that students participating in the program make wise and timely course selections and that they follow the schedule outlined for each term by the YO staff. For simple explanations of commonly used terms, students can refer to the definitions included at the end of this course guide.

Youth Options Checklist

- ☐ Fill out Youth Options Interest form online at www.fvtc.edu/youthoptions.
- ☐ Upon receiving welcome e-mail, follow instructions outlined in e-mail to become familiar with the Youth Options process.
- ☐ Check e-mail account and Blackboard regularly for important information regarding Youth Options.
- ☐ Meet with your high school counselor to select courses from the Youth Options Course Guide.
- ☐ Submit completed PI8700A form to high school by deadline (March 1 for fall classes, October 1 for spring classes).
- ☐ Submit transcripts, test scores, or other pre-requisite (as needed).
- ☐ Register for college classes at Fox Valley Technical College.

The Youth Options staff is ready to help students, parents, and high school counselors through their academic experience at Fox Valley Technical College. They can be reached via email at youthoptions@fvtc.edu or via phone at (920) 225-5900.

Refund Policy

Refunds are processed according to the Wisconsin Technical College System refund policy. Wisconsin Technical College 10.08, Wisconsin Administrative Code, establishes the requirements for district policies and procedures related to student fee refunds. Refunds are applicable only from the date you officially drop the class through Enrollment Services or MyFVTC. FVTC will **not** drop any classes for you for non-payment or non-attendance. Drop requests are **not** accepted through instructors. Refunds are based on the official start date of the class, not by the date the student first attends/accesses the class or obtains the class materials.

100% Refunds

If the district cancels a class, 100% of student fees will be refunded. If you drop before the first day of class, 100% of student fees will be refunded. If you drop a class before or at the time 10% of the class's potential hours of instruction have been completed and add another class on the same day, you will receive a 100% credit for all applicable student fees for the dropped class. This credit will be applied to the fees of the added class. If the credit exceeds the fees for the added class, the excess amount will be refunded to you. If the credit is less than the fees applicable to the added class, the shortfall will be billed.

80% Refunds

80% of all applicable student fees are to be refunded if the class is dropped before or at the time 10% of the class's potential hours of instruction have been completed. A "W" grade will be assigned.

60% Refunds

60% of all applicable student fees are to be refunded if the class is dropped after 10% but before more than 20% of the class's potential hours of instruction have been completed. A "W" grade will be assigned.

0% Refunds

NO refund will be provided if the class is dropped after 20% of the class's potential hours of instruction have been completed and a "W" grade will be assigned. If more than 60% of the class's potential hours of instruction have been completed, a "WF" grade will be assigned.

Refund Appeals

All refund appeals must be initiated by sending a written request with proper documentation to the Registrar no later than sixty (60) calendar days after the class start date. A refund request made after the 60 day grace period will **not** be accepted and you will be responsible for payment. Refunds for extenuating circumstances (situations outside of your control) will be made at FVTC's discretion.

Attendance Policy

Students enrolled in courses at Fox Valley Technical College are expected to attend and participate in classes regularly to receive the maximum benefit from their educational experience. Attendance is the responsibility of the individual student, including notification of absence as required by the instructor and arranging for the completion of missed course work.

Specific attendance standards for courses, labs, internships, and clinicals may be established by instructional departments and authorized by the division dean. If specific attendance requirements are established, they will be communicated to students in writing (via the course syllabus), by the instructor at the first class session, and attendance must be documented by the instructor. Departments and instructors are expected to make reasonable accommodations for student absences due to illness, family emergencies, extreme weather conditions, and other extenuating circumstances.

If a student is absent from an assigned course for two consecutive weeks or 10% of class hours (unexcused absence), the instructor must immediately assign one of the following grades in the grading system:

WI – If the withdrawal occurs during the first 60% of the course or due to extenuating circumstances as determined by the instructor.
F – If the withdrawal occurs during the final 40% of the course and the instructor determines there are no extenuating circumstances involved.

Receiving one of the above grades does NOT indicate that the student has dropped the class. Students receiving WI or F grades are not eligible for refunds. In addition, participating high schools have attendance policies for their YO students.

Accuplacer

If a course requires Accuplacer scores as a pre-requisite, you will be required to complete the test prior to enrollment in the course. We recommend scheduling the test as early as possible.

Your high school may offer Accuplacer tests. Check with your High School Guidance Office. If you cannot take the Accuplacer test at your high school, you will need to schedule a time to take it at an FVTC campus. Go to the Accuplacer web page at http://www.fvtc.edu/ACCUPLACER to arrange an Accuplacer test through FVTC. There are also Accuplacer study materials and resources available through this link. The cost of the Accuplacer test at Fox Valley Technical College is **$15**. Your high school is not responsible for payment of this fee. The testing fee is the responsibility of the student.

NOTE: Fox Valley Technical College also accepts ACT scores in place of Accuplacer scores. We will not accept PACT scores. If you have taken the ACT or the Accuplacer at your high school, please make sure your test scores are sent to:

Youth Options
Fox Valley Technical College
PO Box 2277
Appleton, WI 54912-2277
Email: youthoptions@fvtc.edu
Fax: 920-735-2484

Bennett Mechanical Comprehension Test

The Bennett Mechanical Comprehension Test (BMCT) is used to determine a student's aptitude for learning mechanical skills in an applied mechanical job. It measures a complex set of abilities. The BMCT is a 30 minute timed test, costing **$14**. Your high school is not responsible for payment of this fee. The testing fee is the responsibility of the student. It is a pre-requisite for certain classes in automotive programs. The following programs also require completion of the BMCT for admission:

- Automotive Maintenance Technician (TD)
- Automotive Technician (TD)
- Automotive Technician – Imports (TD)
- Automotive Technology (AAS)
- Automotive Technology – GM ASEP (AAS)
- Automotive Technology – Imports (AAS)

General Program Information

All degree programs at Fox Valley Technical College are designed to prepare students for entry into the career field of their choice. Because of this, there is great variety in the courses required for individual programs. Students wishing to apply to a program at Fox Valley Technical College may do so **during** their senior year for admission into a term that occurs **after** they have completed high school.

If a student knows which degree program they want to enter at Fox Valley Technical College, Youth Options provides them the opportunity to complete courses which are applicable to that degree. Their course selections must still be made through the Youth Options Course Guide. **Any courses chosen from outside the Youth Options Course Guide must be paid for by the student.**

To learn the program requirements for a given program, students and counselors should visit www.fvtc.edu/programs. From the list of areas of study, select the appropriate area, then select the program of interest. Click on *More Info*. Below the program description, there will be several icons with additional program information, career opportunities, and a list of additional options. From this list, select *Admissions Requirements* for a list of requirements for that particular program.

While degree program course requirements vary widely, some courses are consistently required to ensure students have a strong foundation of general knowledge. These are referred to as General Education courses. Below is a partial list of **commonly** required General Education courses at Fox Valley Technical College:

Class	**Catalog #**	**Credits**	**YO Approved**
Written Communication	10-801-195	3	Yes
English Composition 1	10-801-136	3	Yes
Oral/Interpersonal Communication	10-801-196	3	Yes
Intro to Diversity Studies	10-809-172	3	Yes
Intro to Psychology	10-809-198	3	Yes
Psychology of Human Relations	10-809-199	3	Yes
College Math	10-804-107	3	Yes
Speech	10-801-198	3	Yes
General Biology	10-806-114	4	Yes
Intro to Ethics	10-809-166	3	Yes
Economics	10-809-195	3	Yes
Intro to Sociology	10-809-196	3	Yes
Contemporary American Society	10-809-197	3	Yes

Agriculture, Horticulture & Natural Resources

Agriculture / Agri-Business / Farm Operations

Farm Safety and Equipment Operation
10-003-105 **1 Credit**

Shows the student how to operate a tractor over 20 PTO horsepower, including how to connect and disconnect equipment or equipment parts. Topics include specialized machinery for livestock, toxic environments, agricultural chemicals, blasting, fertilizer and the youth certificate program.

Agriculture Hydraulic Systems
10-003-110 **2 Credits**

Introduces the student to the fundamentals of fluid power, components, different hydraulic systems, hydraulic schematics and terminology of the hydraulic systems used on modern agriculture mobile equipment. Includes operation of fluid flow on various systems, maintenance and system diagnostics. Students are exposed to the special tools used to test hydraulic systems. The use of these special tools and technical manuals are stressed.

Agriculture DC Electrical Systems
10-003-131 **3 Credits**

Focuses on DC electron flow theory, different types of circuits and troubleshooting the circuits. Students will also use schematics to diagnosis problems. Starting and charging systems will be covered.

Dealership Parts and Service
10-003-133 **3 Credits**

Introduces the student to the role and function of the parts and service department of a dealership. Included are service reports, repair orders, warranty process, computerized parts invoicing, parts inventory, merchandising and customer relations. Students will work with a parts and service software program.

Shop Tool and Safety Principles
10-003-134 **3 Credits**

Focuses on equipment shop safety, correct tool usage and types of fasteners. Students will perform some basic duties in the shop using different types of tools and fasteners. Students will gain knowledge of the different types of tools and fasteners. They will also learn and perform some basic welding and cutting torch applications.

Agriculture/Outdoor Power Equipment Welding
10-003-166 **2 Credits**

Prepares students to perform oxyacetylene, arc, MIG and TIG welding procedures. Laboratory activities will provide the student with hands-on practice joining metal with the various methods of welding.

Integrated Pest Management and Weed Identification
10-006-102 **3 Credits**

Acquaints students with the general use, safety, laws and regulations for chemical application in Wisconsin. Completion of the Wisconsin Commercial Applicators Certification is an optional portion of the course. Identification of the major weeds found in Wisconsin crop lands is emphasized.

Agricultural Marketing
10-006-103 **3 Credits**

Explores and gives the student an understanding of the basic principles of marketing and the ability to apply these principles to the distribution of farm products.

Crop Scouting Training
10-006-109 **3 Credits**

Includes hands-on identification and management of insects, diseases and seedling weeds found in Wisconsin crops. Crop development and herbicide damage issues will also be covered.

Dairy/Livestock Nutrition
10-006-113 **3 Credits**

Acquaints the students with the nutrients essential for livestock growth, production and reproduction. The anatomy and physiology of digestion and nutrient absorption will be discussed for the single stomach and ruminant animal. Proper feed sampling techniques, feed analysis and other nutritional information will be covered in preparing the student for Dairy/Livestock Ration Balancing.

Dairy/Livestock Ration Balance
10-006-114 **3 Credits**

Teaches students the mechanics of balancing livestock rations using the National Research recommendations and other information. Computers will be used to develop rations. The makeup and functions of the nutrients essential for livestock will be discussed in the preparation of dairy and beef rations. The student will complete a cost analysis of all rations.

Agricultural Crop Production
10-006-119 **3 Credits**

Prepares students to recognize and implement basic crop production management techniques for corn, soybeans, alfalfa, small grains and general forages used on Wisconsin farms. Field preparation, fertility, seed selection, planting and in-season management of specific crops will be emphasized.

Introduction to Agribusiness
10-006-133 **3 Credits**

Provides an overview of, and exploration into career pathways and employment opportunities, in the agricultural industry. Key issues discussed include trends and economic concepts of production, marketing and consumption of agriculture products, principles of management, and financial management.

Agribusiness Sales
10-006-134 **3 Credits**

Covers the basic principles of agribusiness sales. Topics include recognizing potential customers, building a positive customer relationship, designing sales plans, and using market and sales databases. The concepts will be presented using hands-on activities. Students will complete a sales project and presentation.

Animal Science Fundamentals
10-006-140 **3 Credits**

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. Students will experience animal concepts through the completion of hands-on activities.

Crop Science
10-006-141 **3 Credits**

Provides fundamental knowledge of the major crops grown in Wisconsin. Topics include crop growth and development, physiology, and nutrition; seed germination and selection; environmental factors and agronomic problems that affect crop development.

Introduction to Soils
10-006-143 **3 Credits**

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

Dairy/Livestock Herd Management
10-006-145 **3 Credits**

Covers the herd health and reproductive systems of the dairy and livestock animals. The class will cover various herd health problems, including mastitis, milk fever and similar common livestock health problems. A herd health and reproductive management program will be developed.

Dairy Genetics and Reproduction
10-006-148 **3 Credits**

Designed for the student who needs a comprehensive knowledge of dairy genetics and reproduction. Emphasis is on basic genetic principles and sire selection. Students will learn the anatomy and physiology of the bovine female reproductive tract and the management of the estrous cycle in cattle.

Dairy/Livestock Records Management
10-006-149 **3 Credits**

Acquaints the students with herd management programs using traditional and computerized herd record keeping systems. Students will have hands-on experience with the latest available programs used in dairy record keeping.

Farm Computers
31-080-305 **1 Credit**

Designed to allow students to operate and explore the utilization of computers and computer software for production agriculture application. Computer use and the latest in agricultural software will be emphasized.

Animal Nutrition, Basic
31-080-350 **1 Credit**

Acquaints the student with the nutrients essential for livestock growth, production and reproduction. The anatomy and physiology of digestion and absorption are discussed for single stomach and ruminant animals, with the emphasis on dairy cattle.

Soil Principles and Fertilization
31-080-353 **1 Credit**

Acquaints the student with the physical, chemical and biological properties of soil in relation to fertility and good soil management. The students will sample soils on their farms and identify fertility needs from the soils test report. Nutrient management will be discussed.

Tractor Maintenance Overview
31-080-355 **1 Credit**

Provides to the student basic diesel engine system operation and maintenance skills and knowledge to maintain the fuel, cooling and lubrication systems on tractors and other agricultural machinery.

Agricultural Building Design and Construction
31-080-356 **1 Credit**

Acquaints the student with planning, design and construction skills for agriculture facilities. This course focuses on the selection of building materials, cost and construction of farm buildings.

Advanced Tractor Maintenance
31-080-357 **1 Credit**

Provides the students with knowledge and skills needed to maintain and service the electrical systems associated with farm machinery. Students will perform basic service on the different electrical systems.

Pre-requisite: Tractor Maintenance Overview (31-080-355)

Agricultural Marketing **1 Credit**
31-080-367

Covers and analyze the various marketing channels for farm products in this one-credit class. The buying and selling of feed components as well as the marketing of excess dairy cattle and young stock will be discussed. Agricultural organizations which play a part in the agricultural marketing system and acquaint the student with the future's market.

Cash Crop Principles
31-080-369 **1 Credit**

Enables students to develop management and production strategies for corn, soybeans, and related grain crops of Wisconsin.

Welding Repair and Maintenance
31-080-395 **1 Credit**

Emphasizes the use of M.I.G., arc and the oxyacetylene welding equipment in the repair and maintenance of farm machinery. The student will learn the basics of each of the systems. The expansion and contraction of metals, removal of bearings, and use of special rods and equipment will be emphasized.

Forage and Grain Harvesting Equipment
31-080-396 **1 Credit**

Provides students with a comprehensive knowledge of forage and grain harvesting equipment. Emphasis is on design, operation, adjustments and maintenance of the equipment. Farm machinery management and operational expenses will also be stressed.

Livestock Nutrition
30-090-384 **3 Credits**

Focuses on the skills, techniques and concepts necessary for sound feeding management. Topics include determining feed values, economics of feed, nutritional terminology and requirements, feed consumption of livestock, understanding feed tag labels for protein, energy, minerals and vitamins. Evaluation of base feed and feeding programs, and metabolic disease of lactating livestock. Classes are held throughout the year and include classroom and on-farm instruction.

Horticulture

Introduction to Horticulture
10-001-111 **3 Credits**

Provides an overview of the horticulture profession, including its role and importance throughout history. Current trends and career opportunities will be covered. Particular attention is given to horticulture crops, plant classification, their use, and the interrelationships between the environment, plant growth and plant development.

Horticulture Soils
10-001-112 **3 Credits**

Explores the properties of soils and applies them to horticultural uses as a growing medium and as an engineering base for landscaping.

Interiorscaping and Greenhouse Management
10-001-120 **3 Credits**

Studies the identification, characteristics and physical requirements of interior plants. Also studies the operation of a greenhouse to include growing, soils, pest control, and basic procedures for operating and maintaining a greenhouse.

Turf Management and Irrigation Systems
10-001-130 **2 Credits**

Studies the overall basics of lawn (turf) applications including soils, grading, Wisconsin grasses and maintenance. Students will develop an understanding of the design, operation and maintenance of irrigation systems.

Woody Ornamental Plant ID
10-001-158 **3 Credits**

Explains plant classification and identification techniques. Students will utilize these techniques to properly name and identify commonly used deciduous and evergreen trees and shrubs. Culture and care will also be discussed.

Survey of Herbaceous Plants
10-001-159 **3 Credits**

Studies commonly used annual, bulb and perennial herbaceous plants, with an emphasis on their use in the landscape, culture and care.

Landscape Plants, Maintenance of
10-001-170 **3 Credits**

Studies the maintenance and care of woody plants, including evergreens, vines, garden flowers, bulbs and nursery stock. Discusses pruning, training, fertilizing, watering, planting, physical and chemical control of plant growth, transplanting, winterizing, weed control and production.

Landscape Design 1
10-001-174 **3 Credits**

Focuses on developing a residential landscape plan using such outdoor room concepts as function, design principles and composition. The course also includes drafting, site analysis and graphics.

Natural Resources Technician

Exploring Natural Resources
10-057-104 **4 Credits**

Provides basic study of natural resources, focusing on their abundance, importance and conservation. The physical biological variables of the environment will be studied in field and classroom settings. Career development will be incorporated to expose students to job-related activities for the following core areas: wildlife and fisheries, forestry, surveying, outdoor recreation, soils, and water quality and wastewater management.

Ecology
10-057-109 **2 Credits**

Examines the relationships and interrelationships of living organisms in their environment. Students study natural selection and speciation, environmental conditions, populations and competition, succession, energy flow and biogeochemical cycles, and the diversity of ecosystems.

Co-requisite: Written Communication (10-801-195) or English Composition 1 (10-801-136)

Forest Recreation Environmental Education
10-057-131 **3 Credits**

Emphasis will be creating and presenting environmental education activities to various audiences. The design and delivery of environmental curriculum is the focus and will be augmented with additional public presentations and volunteering at area environmental centers. Individual and group laboratory projects and presentations are required.

Pre-requisite: Exploring Natural Resources (10-057-104); Ecology (10-057-109); Written Communication (10-801-195)

Soil and Water Conservation
10-057-134 **3 Credits**

Examines the physical, chemical and biological properties of soil in relation to water and wind erosion. The identification, planning and use of soil and water conservation practices are examined, and students study the relationship of soil fertility to conservation and management.

Pre-requisite: Exploring Natural Resources (10-057-104); Ecology (10-057-109); Natural Resources Common Topics (10-057-143); Written Communication (10-801-195); Math for Common Topics (10-804-117)

Plant Identification
10-057-140 **1 Credit**

Provides a basic study of the trees, grasses, herbs and aquatics of Wisconsin. The class focuses on the principal species of seven major plant communities: forest, bog, agriculture, prairie, marsh, shrub and beach.

Natural Resources Common Topics
10-057-143 **2 Credits**

Introduces U.S. public land surveys, topographic maps, orienteering principles and mapping. Other topics include the polar planimeter, dot grid, abney levels and clinometers, basic aerial photo uses, and chainsaw use and maintenance.

Pre-requisite: Exploring Natural Resources (10-057-104). Co-requisite: Math for Common Topics (10-804-117)

Outdoor Power Equipment

Introduction to Small Engines
10-461-102 **1 Credit**

Provides the student with theory and hands-on experience with gas outdoor power equipment. Fuel, cooling, lubrication and DC electrical systems will be emphasized.

Four Stroke Small Engines
10-461-112 **3 Credits**

Gives an in-depth overview of engine design and operational theory. Parts identification, function and repair are incorporated into the disassembly, reconditioning and assembly of small air-cooled engines. Safety glasses are required.

OPE Drivelines and Chassis
10-461-113 **3 Credits**

Focuses on the equipment used in groundskeeping, landscaping and maintenance of turf grass. Belt, gear, and hydrostatic transaxles and drivelines for lawn mowers, tillers, snowblowers, garden tractors, zero-turn mowers and compact tractors are included in this course. Safety glasses are required.

OPE Operation and Maintenance

10-461-114 **2 Credits**

Focuses on maintaining and operating skid steer loads, forklifts, till-handlers, turf mowing equipment and landscape equipment. The course provides operators' certification. Safety glasses are required.

OPE Handheld Power Units
10-461-115 **3 Credits**

Emphasizes the repair of two-cycle and small four-cycle engines used on chainsaws, cutoff saws, line trimmers, backpack blowers, hedge trimmers and other small power units. Students will learn new emission requirements and understand the current laws on product liability. Safety glasses are required.

OPE DC Electrical Systems
10-461-116 **3 Credits**

Covers Ohm's law and electrical theory, operation and troubleshooting methods for batteries, starting circuits, charging circuits and accessories. Safety glasses are required.

OPE Diesel Engine Systems
10-461-118 **3 Credits**

Provides technicians with skills and knowledge of gas and diesel engine theory, fuel, electrical, coding and lubrication systems.

OPE Customer Service and Sales
10-461-122 **2 Credits**

Focuses on the importance of the customer and develops customer service skills. Applies retail sales principles and emphasizes the importance of knowing the product's features, prospecting clients, presenting the product and closing the sale.

Parts and Service Management
10-461-141 **3 Credits**

Utilizes computer software programs such as PartSmart and Web-based programs to learn how to look up parts and create parts invoices. Includes methods of merchandizing products for increased sales, and utilizes a computer software, DealerWin, to develop service orders, invoice repair orders and develop a customer data base.

Wildland Fire Training

Wildfire Introduction S130/S190/L180
10-058-160 **2 Credits**

Prepares new firefighters in basic firefighting skills and behavior factors that will aid them in the safe and effective control of wildland fires. Students must be 18 years of age on or before the first day of class.

Ecosystem Management
10-058-169 **2 Credits**

Explores the role of fire in biotic and abiotic systems. This class builds from the individual to the ecosystem and incorporates human influence.

Business Administration & Finance

Accounting

Principles of Accounting
10-101-107 **3 Credits**

Introduces basic concepts and general principles of accounting to non-accounting students. Topics include financial statements, merchandising accounting for cash, inventory, payroll, budgeting and accounting software.

Banking / Business Administration

Business Law 1
10-102-103 **3 Credits**

Introduces legal principles and standard business law concepts and their implications for business. It emphasizes contracts, sales, commercial paper, bailment, agency and real property, with references to the Uniform Commercial Code and recent consumer legislation.

Introduction to Business
10-102-112 **3 Credits**

Provides an overview of the variety of activities in the world of business. It focuses on the responsibilities connected with operating a business from both organizational and managerial viewpoints. It also examines the role of government in business.

Introduction to Money and Banking
10-114-124 **3 Credits**

Provides a study of money and its creation, monetary systems, the operation of the Federal Reserve System, commercial banking systems and international monetary problems. It also examines the factors that determine the value of money and the operation of the banking system in relation to price level, employment, savings and investment, and economic activity.

Financial Planning
10-114-175 **3 Credits**

Approaches planning from the perspective of an individual who applies specific financial concepts and principles to setting financial goals, choosing a career, budgeting and cash flow management. Topics include credit, income taxes, asset protection, investments, retirement and estate planning.

Stock and Bond Investments
10-114-176 **3 Credits**

Provides an overview of the problems of investing; the stock, bond and mutual fund investment vehicles available; and the markets in which investments are traded.

Business Health Services

Intro to Medical Administrative Careers
10-160-100 **1 Credit**

Introduces various aspects of medical administrative careers. Explores a variety of topics including career expectations, future employment opportunities and current employment trends.

Business Technology / Office Systems

Introduction to Microsoft Office Suite
10-103-120 **2 Credits**

Provides an opportunity to gain technical skills employers are seeking, by using the features in Outlook, Word, Excel, and PowerPoint. Through hands-on course work, students will be able to integrate Word, Excel and PowerPoint.

Web Technologies
10-106-101 **2 Credits**

Provides a basic understanding of the Web as well as the tools used to create Web pages, blogs and other features. Reviews social and business Web tools and components. Basic computer hardware and software will also be explored.

Office Desktop Publishing: Microsoft Publisher
10-106-102 **1 Credit**

Develops skills for working with different types of office documents such as brochures, newsletters and reports. Introduces page layout, graphics, styles and fonts.

Keyboarding for PC Users
10-106-107 **1 Credit**

Introduces keying by touch. It emphasizes control of the alphabetic keys and the numeric keypad. Practice drills to improve keying skills are included.

Business Writing and Formatting
10-106-108 **3 Credits**

Focuses on development of spelling, grammar, punctuation and formatting rules as applied to business documents in both print and digital mediums.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Keyboarding Speed Development
10-106-112 **1 Credit**

Focuses on improving typing speed and accuracy through the use of skill-building software. Introduces data entry using the numeric keypad.

Effective Business Practice
10-106-118 **3 Credits**

Provides hands-on experience and practice using a variety of business communication techniques providing students with knowledge, poise, tact and the skills to conduct themselves in the business world with confidence. Included in the course is The 7 Habits developed by Stephen Covey.

Meeting and Event Management Fundamentals
10-106-140 **3 Credits**

Focuses on planning a successful meeting/event. Included are pre-planning activities, managing on-site meeting needs, and conducting follow-up activities.

Business Relationship Development
10-106-160 **2 Credits**

Provides students with opportunity to develop and analyze networking and business relationships. Includes examination of the networking process, tools to facilitate and enhance networking opportunities and networking communication development.

Office Fundamentals
10-106-166 **3 Credits**

Focuses on the development of fundamental office skills. Students will gain skill in general office duties, records retention and maintenance, application of office technologies, verbal and written communication, and customer service.

Practical Office Software
10-106-183 **1 Credit**

Explore how to use Microsoft Office software in the office. Focus will be on basic features and concepts associated with the software.

Entrepreneurship

Introduction to Entrepreneurship
10-145-104 **3 Credits**

Provides students with opportunities to investigate, understand and apply the process of choosing entrepreneurship as a career path. Explores the entrepreneurial experience by focusing on an awareness of entrepreneurship, opportunity recognition, business concept development and preliminary feasibility testing. Students gain the knowledge, skills, concepts and strategies relevant for start-up and early-stage entrepreneurs. The practical hands-on approach encourages students to immerse themselves in the entrepreneurial experience.

Technical Communications

Introduction to Professional Communications
10-699-112 **3 Credits**

Provides new students with firm knowledge of the Professional Communications program. Students will explore the careers associated with this field and work on improving technical writing skills. Technical editing and proofreading will be introduced in this course.

Co-requisite: Written Communication (10-801-195) or English Composition (10-801-136)

Introduction to Social Media
10-699-121 **1 Credit**

Introduces social media, such as Facebook, Twitter, LinkedIn and other new media, as used by professional communicators. This 9-week course will stress how to integrate social media for business purposes.

Culinary & Hospitality

Culinary Arts

Introduction to Food Production
10-316-101 **3 Credits**

Introduces quantity food production to the non-culinary student. Topics include preparation of a variety of menu items, equipment use, cooking methods and terminologies, recipe conversion and the essentials of timing and coordination of service.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Culinary Fundamentals
10-316-110 **3 Credits**

Applies the basic principles involved in the purchase, preparation and use of food stuffs. The proper identification and use of equipment and correct measuring techniques are covered. This course provides the theory basis for production courses.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Sanitation for Food Service Operations
10-316-118 **1 Credit**

Focuses on the development of skills to follow sanitation and hygiene provisions in state codes. The Servsafe certification test is included.

Nutrition for Culinary Arts
10-316-119 **1 Credit**

Focuses on the six major nutrients (carbohydrates, proteins, fats, minerals, vitamins and water) and how each is used by the body. The planning of well-balanced diets and the nutritional analysis of diets are emphasized.

Culinary Foundations
10-316-125 **1 Credit**

Prepares the entry-level culinary student for future success by introducing knife skills development, cooking principles and methods, and organizational skills and Mise en place (French phrase meaning “put in place” as in set up). Emphasis is placed on hands-on learning and skills development.

Co-requisite: Sanitation for Food Service Operations (10-316-118)

Meat Identification
10-316-133 **1 Credit**

Focuses on the federal program for meat and fish inspection. Meat grading classification (commercial and institutional) and purchasing are discussed. This course also provides practical lessons in meat preparation.

First Aid/CPR Principle and Practice - Culinary Arts
10-531-101A **1 Credit**

Presents and evaluates basic first aid skills necessary to care for the ill and injured until medical help arrives. Covers the use of an Automated External Defibrillator (AED), as well as CPR for all ages and the recognition and care of cardiac emergencies. Students receive an AHA Heartsaver CPR card and a FVTC First Aid certificate upon course completion.

Hotel and Restaurant Management

Introduction to Hospitality
10-109-121 **2 Credits**

Introduces the various facets of the hospitality industry, including lodging, food service, and tourist attractions. Students explore potential internship and career opportunities.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Hospitality Sales and Promotion
10-109-125 **2 Credits**

Covers sales and promotion in the hospitality industry. The emphasis is on promoting hospitality entities to attract new customers, selling principles and merchandising techniques for products and services, and innovative ways to maintain the interest of existing customers.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Customer Service Management
10-109-126 **3 Credits**

Helps students to understand, apply and manage the principles of good customer service in a variety of hospitality environments. Particular attention will be given to the various roles and responsibilities of hospitality employees as they relate to customer service.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Engineering & Electronic Related Technologies

Automated Manufacturing

Robotics
10-628-112 **2 Credits**

Establishes a firm foundation in industrial robotics. The major electronics and mechanics of common robots are studied. Robot types, typical applications and end-of-arm tooling is presented as well as the programming of pick and place servo robots.

Electro-Mechanical Technology

Electronic Shop Practices
10-620-169 **1 Credit**

Introduces various aspects of the electronic shop such as basic soldering principles, surface mount technology, troubleshooting, repairing and circuit protection devices and performing panel-wiring exercises. Customer relations is also discussed.

Robotics 1
10-620-197 **1 Credit**

Introduces the terminology, movements and the physical construction of the robot and the applications for which they are used. Basic programming is also covered. Students become familiar with the equipment in laboratory activities. Instructor permission required.

Robotics 2
10-620-198 **1 Credit**

Requires students to write programs that enable a robot to perform various operations. Laboratory activities are completed to verify the programs.

Co-requisite: Robotics 1 (10-620-197)

Electronic-Related Technologies

PC Hardware/Operating Systems
10-605-129 **1 Credit**

Trains students to work with a critical tool for technicians and become familiar with computer repair (A+ Prep). Students will experience all through hands-on laboratory activities. They will also learn to understand fundamental computer hardware/software concepts, configuration and troubleshooting.

Digital Electronics 1
10-605-130 **1 Credit**

Introduces digital electronics including Boolean, the operation of logic gates, and the theory of combination logic circuits. Laboratory activities are performed to verify the theory.

Digital Electronics 2
10-605-131 **1 Credit**

Examines data manual usage. This course introduces programmable logic devices and Karnaugh mapping. It also covers encoders, decoders, multiplexers, binary adders and parity circuits. Laboratory activities are performed to verify the theory.

Co-requisite: Digital 1 (10-605-130)

Embedded Programming 1
10-605-145 **1 Credit**

Introduces students to embedded computer systems through exploration of microcontroller operation, architecture and programming. Students will lay the groundwork for future courses and electronic projects while experimenting with programming language concepts and basic interfacing.

CAD for Electronics
10-605-156 **1 Credit**

Introduces students to computer-aided design (CAD) techniques used in the electronics field. Students learn the basics of the AutoCAD software, including the draw, modify, dimension and plotting sets of commands. Students acquire the skills needed to create an electronics symbols library and to draw electronic schematics.

Electronic Construction Techniques
10-605-163 **1 Credit**

Introduces the use of common tools for constructing electronic devices. The safe use and application of hand and power tools is practiced through construction projects. Soldering techniques, both through-hole and surface mount, are studied in detail.

DC Circuits 1
10-660-110 **1 Credit**

Introduces electrical safety and program procedures. The course covers Ohm's Law, power law, series circuits, and voltmeter, ammeter and ohmmeter applications. Number powers, electronic notations, circuit component recognition and diagrams, resistor power ratings, color code, Kirchhoff's voltage law and atomic structure are also included.

Co-requisite: College Technical Math 1 (10-804-115) OR College Technical Math 1A (10-804-113) OR Industrial Maintenance Math (31-804-308) OR College Algebra and Trigonometry with Applications (10-804-197)

DC Circuits 2
10-660-111 **1 Credit**

Covers basic parallel and series-parallel circuits and their properties. Examines the theory, application and design of series-parallel circuits, such as loaded and unloaded voltage dividers and the Wheatstone bridge. Laboratory activities are performed to verify the theory.

Co-requisite: DC Circuits 1 (10-660-110)

DC Circuits 3
10-660-112 **1 Credit**

Covers capacitors and inductors including time constants and instantaneous voltage and current values of RC and RL circuits. Applications and various types of capacitors and inductors are discussed. Magnetism, electromagnetism, and devices, such as relays and solenoids, are also presented. Laboratory activities are performed to verify the theory.

Co-requisite: DC Circuits 2 (10-660-111)

AC Circuits 1
10-660-114 **1 Credit**

Covers AC waveforms and different voltage values including Peak, RMS, Average and Peak to Peak. The operation of transformers is also included. Laboratory activities using the oscilloscope are performed to verify the theory.

Co-requisite: DC Circuits 2 (10-660-111); DC Circuits 3 (10-660-112)

Embedded Programming 1
10-660-151 **1 Credit**

Introduces students to embedded computer systems through exploration of microcontroller operation, architecture and programming. Students will lay the groundwork for future courses and electronic projects while experimenting with programming language concepts and basic interfacing.

Construction Techniques
10-660-163 **1 Credit**

Introduces the use of common hand tools used by technicians. The safe use and application of hand and power tools is practiced through construction projects. Quality workmanship and craftsmanship are emphasized.

Technical Software Essentials
10-660-181 **1 Credit**

Introduces students to the Microsoft Office family of products. Students will create and edit Word documents, Excel spreadsheets, and Access databases.

Computer Systems
10-660-184 **1 Credit**

Introduces students to Windows operating systems and computer hardware. Students will learn through hands-on lab activities covering operating systems, computer hardware, configurations, and troubleshooting techniques.

Mechanical Design Technology

Introduction to AutoCAD
10-606-114 **1 Credit**

Covers the very basics of AutoCAD - introduction to the user interface, basic drawing commands, basic editing commands, and basic viewing commands. This course will give the student a comfort level for working within the AutoCAD environment and the knowledge needed for more advanced CAD courses offered within the various degree programs.

Intermediate AutoCAD
10-606-127 **1 Credit**

Builds upon the groundwork laid down in Introduction to AutoCAD. Students will learn more about drawing commands, editing commands, properties of objects, dimensioning and printing.

Co-requisite: Introduction to AutoCAD (10-606-114)

Health Science

Emergency Medical Services

First Responder with Healthcare Provider CPR
10-531-105 **2 Credits**

Teaches and evaluates the knowledge/skills needed to respond to medical or trauma situations. It includes AED, Combitube, EpiPen, Spinal Immobilization, CPR and skills needed to assist the ambulance crew. This course meets Wisconsin and National licensure guidelines. Students receive an AHA Healthcare CPR card and FVTC Emergency Medical Responder certificate.

Emergency Medical Technician - Basic
10-531-169 **5 Credits**

Presents and evaluates the knowledge and skills needed by ambulance personnel to respond to and treat cardiac arrest and critical medical and trauma situations. Extrication and ambulance operations are also covered. Department consent required. Must submit a copy of a signed BLS Healthcare Provider CPR card to the EMS Department office. The card must be valid for at least one year beyond either the end of class or the date of the expected National Registry Exam (whichever is later).

Pre-requisite: Admission to EMT-Basic program; Completion of EMT-Basic Checklist; Must also submit signed copy of BLS Healthcare Provider CPR card to EMS Dept. FVTC offers CPR classes under catalog 47-531-401.

Emergency Medical Technician Basic Part A
10-531-169A2 **2 Credits**

Presents and evaluates the knowledge and skills needed by ambulance personnel to respond to and treat cardiac arrest and critical medical and trauma situations. Extrication and ambulance operations are also covered. Department consent required. Must submit a copy of a signed BLS Healthcare Provider CPR card to the EMS Department office. The card must be valid for at least one year beyond either the end of class or the date of the expected National Registry Exam (whichever is later).

Pre-requisite: Admission to EMT-Basic program; Completion of EMT Basic Checklist; Must also submit signed copy of BLS Healthcare Provider CPR card to EMS Dept. FVTC offers CPR classes under catalog 47-531-401.

Emergency Medical Technician Basic Part B
10-531-169A3 **3 Credits**

Presents and evaluates the knowledge and skills needed by ambulance personnel to respond to and treat cardiac arrest and critical medical and trauma situations. Extrication and ambulance operations are also covered. Department consent required.

Pre-requisite: Admission to EMT-Basic program; Completion of EMT Basic Checklist; Must also submit signed copy of BLS Healthcare Provider CPR card to EMS Dept. FVTC offers CPR classes under catalog 47-531-401.

General Health

Medical Terminology
10-501-101 **3 Credits**

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.

Intro to Healthcare Computing
10-501-107 **2 Credits**

The focus of this course is the use of technology in healthcare. Learners use common business software applications, including word processing, presentation, spreadsheet, and databases. Communication methods using technology are addressed. Learners gain experience with using the electronic health record (E.H.R.). Healthcare E.H.R. security issues, social media use, and digital healthcare resources are examined.

Medical Law, Ethics and Professionalism
10-501-109 **2 Credits**

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 risk management procedures, and examine legal and bioethical issues.

Body Structure and Function
10-501-153 **2 Credits**

Introduces the basic normal anatomy and physiology of the human body essential for nursing practice. Medical terminology is introduced and plays a significant role in the course. Prior completion of Medical Terminology (10-501-101) is recommended but not required.

Human Diseases for Health Care Professions
10-501-182 **3 Credits**

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.

Introduction to Health Careers
10-501-190 **1 Credit**

Examines health-related careers. Educational preparation, job responsibilities and appropriate personal attributes will be surveyed in order to assist participants in career decision planning. Health career programs which Fox Valley Technical College offers will be highlighted.

Personal Care Worker

Communication/Infection Control for Personal Care Worker
30-510-300 **1 Credit**

Provides an overview of the key concepts of being a Personal Care Worker, teamwork, and professionalism. Students will also examine all the different things they need to consider when going into a client's house to provide care. Participants explore a variety of topics such as communication, assisting with challenging behaviors, emergencies, family dynamics, and respecting differences. Focuses on understanding the concepts of infection prevention. The information will be utilized when providing personal care and housekeeping in the client's home. The key concepts of nutrition will also be explored in this class.

Personal Care 1
30-510-302 **1 Credit**

Focuses on mobility, body mechanics, transfers, assistive devices, bathing, personal hygiene, and grooming.

Nursing Assistant

Nursing Assistant
30-543-300 **3 Credits**

Prepares learners for entry-level employment as assistants to a licensed nurse in a hospital, nursing home, home health agency or community-based residential facility. Covers simple nursing tasks such as bathing and feeding patients, making beds and taking vital signs.

Pre-requisite: Student must be active in Nursing Assistant program and meet all enrollment requirements: completed Nursing Assistant Functional Ability Criteria form, Health History Documentation, and Criminal Caregiver Background Check.

Gerontology

Health and Aging
10-544-160 **1 Credit**

Provides an overview of wellness, exercise, sexuality, spirituality and nutrition as they relate to health and aging.

Physical Aspects of Aging
10-544-161 **1 Credit**

Focuses on understanding the physical aspects of the aging process that are associated with elderly populations. Topics include hearing loss, visual impairments, mobility issues and specific diseases such as Parkinson's disease, stroke, arthritis and diabetes.

Psychosocial Issues and Aging
10-544-162 **2 Credits**

Examines the factors and relationships that affect the older adult. Participants explore a variety of topics such as Alzheimer's, depression and dealing with losses. It also covers elder abuse and drug and alcohol concerns.

Public Policy and Aging
10-544-163 **1 Credit**

Introduces such concepts as elder law, advanced directives and funding sources including Medicare and Social Security. Students review federal, state and professional rights and responsibilities associated with working with an elderly population.

Community Resources for the Elderly
10-544-164 **1 Credit**

Explores available community options and partnerships that serve the aging population. Access to transportation, housing, work and leisure activities is included.

Prevention and Safety Concerns for the Elderly
10-544-165 **1 Credit**

Introduces environmental concerns such as protection from fire, prevention of falls, and medical concerns such as medication management and care provider issues. This is designed for people who are addressing the safety concerns of older adults.

Human Services

Alcohol and Other Drug Abuse Services

Alcohol and Drugs, Risk Reduction
10-550-101 **1 Credit**

Provides a comprehensive, systematic approach to reduce the risk of people of any age developing problems related to alcohol and drug abuse. The health, social, legal, occupational and family problems that result from alcohol and drug abuse are examined.

Developmental Disabilities Services

American Sign Language
10-545-116 **3 Credits**

Provides a foundation in sign language skills to facilitate communication with the deaf and hard of hearing. Pertinent issues are discussed to broaden an understanding of the deaf culture.

Early Childhood Education

Movement and Music for Children
10-307-111 **3 Credits**

Presents movement activities to help children develop sensory awareness, songs and rhythms to use in developing skills and concepts, and ways to help children have fun and learn through movement and music.

Foundations of Early Childhood
10-307-148 **3 Credits**

Introduces students to the early childhood profession. Course competencies include: integrate 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; and explore early childhood curriculum models.

Infant and Toddler Development
10-307-151 **3 Credits**

Teaches infant 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 and more.

Health, Safety, and Nutrition
10-307-167 **3 Credits**

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 and more.

Art, Music, and Language Arts **3 Credits**
10-307-178

Focuses 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 and more.

Pre-requisite: ACCUPLACER Reading >= 54 OR ACT Reading >= 18

Child Development
10-307-179 **3 Credits**

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 ages three through eight; summarize the methods and designs of child development research and more.

Children with Differing Abilities
10-307-187 **3 Credits**

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 and more.

Math, Science, and Social Studies
10-307-194 **3 Credits**

Focuses 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 and more.

Pre-requisite: ACCUPLACER Reading >= 54 OR ACT Reading >= 18

Family and Community Relationships
10-307-195 **3 Credits**

Examines 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 and more.

Human Services

Human Assertiveness
10-520-100 **1 Credit**

Assists individuals to cope effectively with the conflicts experienced in daily living. Topics include fight/flight assertiveness, human rights, manipulation, assertive persistence, authority situations, equal relationships, social assertiveness, and work effectiveness and assertiveness.

Information Technology

Information Technology

Windows Basics
10-107-120 **1 Credit**

Focuses on helping students to improve PC working skills and to understand the tasks an operating system performs. The current Windows Operating System is used to teach concepts and skills. Topics include Windows basics, navigation and file management skills, customizing the Windows working environment, using the Search function, and disk maintenance utilities.

Web Tools
10-107-137 **2 Credits**

Introduces various web tools to aid in the development process of web applications and web sites. Students will gain experience with version control, web analytics and other common tools used within everyday business operations.

Microcomputer Applications
10-107-150 **2 Credits**

Designed for students with little or no hands-on computer experience. Presents the basic functions of the Windows operating system and how to use the word processing, spreadsheet and presentation functions of Microsoft Office software. Students will integrate various functions of several Microsoft packages.

IT Business Applications and Integration
10-107-154 **2 Credits**

Covers intermediate concepts in word processing, presentation, spreadsheet, and database applications found in office software suites along with integration of these applications. Students utilize office applications in real-world situations that require both decision-making and problem-solving skills. Prior knowledge of office software suite applications is beneficial.

Systems Analysis
10-107-158 **3 Credits**

Introduces the principles and techniques of modern system analysis and design. It explores the fundamentals of traditional systems and methodologies, data flow diagrams and case tools. It also tracks the systems' development life cycle and explains the various stages.

IT Concepts
10-107-184 **2 Credits**

Provides students with a foundation in information technology and the use of information systems in today's business environment. Students explore fundamental computer concepts and terminology of the World Wide Web, e-mail, emerging technologies, hardware and software components and devices, programming languages, network basics, operating systems, and ethics.

IT Career Exploration
10-107-187 **1 Credit**

Acquaints students with career options and related job skills, salaries and employment trends in the information technology field. Familiarizes them with the IT program degrees offered at Fox Valley Technical College.

Network Infrastructure 1
10-150-116 **3 Credits**

Covers networking topics including the OSI model, local area and wide area networking. Also focuses on assigning network addresses and configuring network devices including Cisco routers and switches. Includes considerable hands-on learning activities and helps prepare learner for the Cisco CCNA exam.

Pre-requisite: Network Essentials (10-150-162)

Windows PowerShell Scripting
10-150-149 **3 Credits**

Teaches everything you need to know to begin developing your own Windows PowerShell scripts. This involves learning how to interact with the Windows PowerShell command line, learning about Microsoft's .NET framework and how to work with other Windows technologies, such as the Windows registry, as you learn how to become a PowerShell programmer.

Windows Server
10-150-156 **3 Credits**

Covers Microsoft Windows Server 2012 R2 administration including server hardware and software, Active Directory, file resources, printers, disk resources, Web resources, DNS and DHCP. Monitoring and troubleshooting server resources are also examined. Extensive hands-on activities are included.

Pre-requisite: Desktop Management (10-154-107)

Information Assurance
10-150-161 **2 Credits**

Examines the basics of information security, including access control and organizational security policies. This course will include the process of securing user workstations, laptops and mobile devices.

Network Essentials
10-150-162 **2 Credits**

Provides an introduction to networking theory and technologies, including the basics of communication, common protocols, the OSI model, network topologies, local network media, wide area networks, network devices, and networking tools. It focuses on understanding how and why networks work and includes considerable hands-on troubleshooting exercises.

Introduction to Web Graphics
10-152-105 **3 Credits**

Introduces the fundamental concepts necessary to generate and prepare graphics for Web pages. The course will focus on raster as well as vector images. Areas addressed will be color selection, layout, text, optimizing images, creating backgrounds, slicing, creating navigation, transparent graphics and animated graphics. Adobe software will be utilized.

C# Introduction to Programming
10-152-111 **3 Credits**

Introduces students with little or no programming background to programming and logic principles that apply to traditional and Windows systems. Uses C# to apply the principles by developing simple Windows applications.

Computer Programming C++
10-152-114 **3 Credits**

Introduces C++ programming concepts and statements including input and output of data in a console application, variables and data type considerations, if-else and switch-case programming constructs, looping constructs, creating programmer defined functions, arrays, pointers, string manipulation, data structures and sequential file processing. It also introduces Object Oriented Programming in the C++ language.

Pre-requisite: C# Introduction to Programming (10-152-111) OR C# Intermediate Programming (10-152-116) OR JavaScript (10-152-117)

C# Intermediate Programming
10-152-116 **3 Credits**

Covers C# programming concepts and statements starting with basic class/object terminology. Investigates data types, methods and behaviors, iteration, arrays, lists and collections, Windows (GUI) programming, event programming, inheritance, file IO, exception handling and Database access methods.

Pre-requisite: Data Access for Programmers (10-152-168) AND C# Introduction (10-152-111) OR Computer Programming C++ (10-152-114)

JavaScript
10-152-117 **3 Credits**

Teaches basic concepts of programming using JavaScript and XHTML languages. Focuses on embedding JavaScript in HTML, program control logic and introduces object-oriented programming.

Pre-requisite: HTML (10-152-120)

HTML
10-152-120 **2 Credits**

Presents the foundation skills necessary to create Web pages using HyperText Markup Language (HTML). Covers design concepts, hypertext links, tables, frames and Cascading Style Sheets (CSS).

Database Concepts
10-152-155 **2 Credits**

Uses hands-on exercises and projects to give students experience with using databases for data storage and retrieval. To encourage students to become more sophisticated database users, background information and general relational database concepts are included.

Data Access for Programmers
10-152-168 **3 Credits**

Provides background in fundamental database concepts, design, documentation, implementation and distribution involving the relational database model. Students will create, query and update relational databases using Structured Query Language (SQL).

Emerging Technologies and Trends
10-154-101 **3 Credits**

Explores the acquisition and support roles of PC peripheral technologies. Learn to use different learning methodologies to develop and present a Portfolio of Assessment. Through lectures, demonstrations and hands-on applications, students examine file formats, digital imaging (cameras, scanners and video), printer technologies, PDAs, storage devices, sound technologies and displays.

IT Customer Service Skills
10-154-102 **2 Credits**

Covers the interpersonal, communication and problem-solving skills required in technical support positions. Exercises provide interaction with other learners in a team. Students explore the information and technical tools needed to function effectively in a support position. Students will be expected to schedule an additional hour each week in the on-campus Student Help Desk, developing skills working with customers in a help desk setting.

Help Desk Concepts
10-154-103 **4 Credits**

Introduces techniques used to install software, document software installations and how to train end-users. Explains basic concepts and implementation of a training plan. Also presents an overview of help desk operations. Students gain a better understanding of how people, processes, technology and information affect the typical help desk. Students will be expected to schedule an additional hour each week in the on-campus Student Help Desk, developing skills working with customers in a help desk setting.

Advanced Desktop Management
10-154-105 **2 Credits**

Provides students with the background needed to build the knowledge and skills to support end-users and computers running the Microsoft suite of productivity applications. The course is directed at the skills needed to work in a variety of environments, including corporate environments as well as support for home users via phone support, remote support and retail counter support.

Pre-requisite: Desktop Management (10-154-107)

Desktop Repair and Maintenance
10-154-106 **2 Credits**

Covers configuring, maintaining, upgrading and repairing Intel-based computers and exploring functions and interrelations between components. The course examines system configuration, component care, system improvement, troubleshooting and failure identification. Advanced PC operating system concepts are also covered.

Co-requisite: Desktop Management (10-154-107)

Desktop Management
10-154-107 **2 Credits**

Introduces students to the skills needed to support client PC Operating Systems. Through significant hands-on activities, learn how to configure, secure, utilize and troubleshoot client operating systems.

Law Enforcement & Public Safety

Criminal Justice

Security Life Safety
10-504-118 **2 Credits**

Learn those life safety issues that affect physical security hardware recommendations. Apply those principles to settings in the business world as they relate to current and recommended physical security hardware. Students will visit business establishments to view and identify related instructional units.

Introduction to Corrections
10-504-201 **3 Credits**

Examines the concept of punishment and its form, functions, and enforcement throughout history, with an emphasis on the operation, structure, clientele, and issues confronting the institutions, agencies, and programs encompassing the corrections system including jails, prisons, and probation and parole.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT (Reading/English) >= 18

Criminal Justice System
10-504-204 **3 Credits**

Distinguish the roles of courts and law enforcement agencies; identify the purpose of law enforcement in American society; describe how professionalism and ethics relate to law enforcement; understand crime in America; explain basic aspects of criminal law; gain an understanding of sentencing of offenders as it relates to prison and jails; compare adult and juvenile justice.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT (Reading/English) >= 18

Criminal Law - National
10-504-902D1 **3 Credits**

Examines the general principles of criminal law and the elements of crime. Students attempt to recognize when a crime has occurred, focusing on statutes that are most often used by a security professional. Students also work with the criminal statutes from the state in which they reside.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT (Reading/English) >= 18

Forensic Science

Introduction to Forensic Science
10-504-110 **3 Credits**

Explores the applications of science in the field of crime scene management from the crime scene to the courtroom and beyond. Students will focus on the examination and reconstruction of various crime scenes with the emphasis on the identification, collection, documentation and preservation of physical evidence.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT (Reading/English) >= 18

Laboratory Methods for Forensic Science
10-806-120 **1 Credit**

Introduces scientific methods used in a laboratory. Emphasis is on general laboratory safety and specific precautions for working safely with chemical or biological materials. Proper techniques in documentation will be practiced. The learner will become familiar with identification of laboratory equipment and become proficient at laboratory measurements.

Manufacturing

Machine Tool Technology

Cold Manufacturing Techniques
32-420-314 **1 Credit**

Focuses on the manufacturing processes not necessarily done in a machine shop and covers techniques performed on materials in a cold state. Topics include cold-working metals, metal stamping and forming in presses, recent techniques in metalworking, and polishing and finishing of metal surfaces.

Measurement & Benchwork 1
32-420-331 **3 Credits**

Builds a foundation for subsequent training in machining, industrial maintenance or other industrial areas requiring correct and accurate use of hand tools and precision measuring instruments in a safe manner. Prepares students for entry-level machine operator or maintenance machinist position in an industrial plant.

Pre-requisite: ACCUPLACER Arithmetic >= 65 OR ACT Math >= 18 OR Math for the Trades (31-804-307) with a C or better; ACCUPLACER Reading >= 54 OR ACT Reading >= 18

Engine Lathe 1
32-420-333 **3 Credits**

Introduces aspiring machinists or maintenance mechanics to the basic operations and safety practices associated with the engine lathe. Prepares students for entry-level machine operator or maintenance machinist positions in an industrial plant.

Pre-requisite: ACCUPLACER Reading >= 54 & Arithmetic >= 65 OR ACT Reading >= 18 & ACT Math >= 18; Instructor consent required.

Manual Milling Machines 1
32-420-335 **3 Credits**

Introduces aspiring machinists or maintenance mechanics to the basic operations and safety practices associated with the manual milling machine. Prepares students for entry-level machine operator or maintenance machinist positions in an industrial plant.

Pre-requisite: ACCUPLACER Arithmetic >= 65 OR ACT Math >= 18; Instructor consent required.

Basic Blueprint Reading for Machine Tool Operations
32-420-350 **1 Credit**

Focuses on the interpretation of machine drawings. Students study isometric and orthographic views on drawing and develop simple working drawings. Topics include dimensions, internal and external threads, holes, bores, fillets, radii, surfaces, planes, metric and geometric dimensioning and tolerancing.

Welding

Basic Welding for Machine Tool Operation
32-442-301 **1 Credit**

Focuses on basic concepts of torch operation, gas metal arc welding and gas tungsten arc welding processes. Students will learn welding theory as well as how to set up and operate these welding processes and complete lab work with proficiency.

Hot Welding Manufacturing Processes
10-457-103 **2 Credits**

Introduces the hot-welding processes used in industry. Students examine the manufacturing of steel, heat treating, foundry work, casting, rolling, forging, extrusion and welding.

Welding/Metal Fabrication Introduction & Safety
10-621-105 **1 Credit**

Provides instruction in welding and metal fabrication safety. Students will identify environmental work and personnel hazards common with the industry and proper personal protection methods. Students will also perform common tasks essential to utilization of the welding and metal fabrication lab.

Welding Print Reading
10-621-108 **1 Credit**

Provides practice in reading shop drawings. Topics include orthographic projection, auxiliary views, revolved sections, surface and centerline relationships, isometric drawings, scale drawing and tolerances.

Co-requisite: Welding & Metal Fab Intro & Safety (10-621-105); Weld Symbols (10-621-114)

Weld Symbols
10-621-114 **1 Credit**

Teaches students to interpret detailed weld symbols using the American Welding Society standard.

Co-requisite: Welding & Metal Fab Intro & Safety (10-621-105); Welding Print Reading (10-621-108)

Welding Metallurgy
10-621-116 **3 Credits**

Introduces students to basic metallurgy including the location of ore deposits, derivation of metals from their ores, refinement and purification, and admixture and alloying. The classification of ferrous and nonferrous metals and the study of basic metallurgical diagrams is also discussed. Students focus on the behavior of metal during welding and the effects of welding on the properties of metals.

SMAW Techniques 1
10-621-121 **2 Credits**

Covers the process commonly known as stick welding. Upon completion of this course, the student will be able to weld in all positions, read some basic weld symbols, and have a basic understanding of written welding procedures.

Co-requisite: Welding & Metal Fab Intro & Safety (10-621-105)

GMAW Techniques 1
10-621-123 **2 Credits**

Demonstrates welding on steel sheet metals and plates. Emphasis is placed on axial spray, pulse spray and short circuit mode of transfer. Upon completion of this course, the student will be able to weld in all positions, read basic weld symbols, and have an understanding of written welding procedures.

Co-requisite: Welding & Metal Fab Intro & Safety (10-621-105)

GMAW Techniques 2
10-621-124 **2 Credits**

Teaches students to weld on stainless steel and aluminum sheet metal and plate. The student will be able to differentiate, select proper electrodes, shielding gases, and properly adjust parameters. Emphasis is placed on axial spray, pulse spray and short circuit mode of transfer depending on base metal. Upon completion of this course, the student will be able to weld in all positions, read some basic weld symbols, and have a basic understanding of written welding procedures.

Co-requisite: Welding & Metal Fab Intro & Safety (10-621-105); GMAW Techniques 1 (10-621-123)

FCAW Techniques
10-621-125 **2 Credits**

A study and operation of primarily flux cored arc welding. The student will learn about the different types of electrodes, fluxes and shielding gases used in these processes. Students will be able to weld in all positions, read some basic weld symbols, and have a basic understanding of written welding procedures.

Co-requisite: Welding & Metal Fab Intro & Safety (10-621-105)

GTAW Techniques
10-621-126 **2 Credits**

A study and operation of primarily gas tungsten arc welding on some mild steel, with the majority of work on stainless steel and aluminum. The student will learn about the different types of electrodes and shielding gases used in these processes. Students will be able to weld in all positions, read some basic weld symbols, and have a basic understanding of written welding procedures.

Co-requisite: Welding & Metal Fab Intro & Safety (10-621-105)

Marketing

Interior Design

Fundamentals of Design
10-304-110 **3 Credits**

Provides a foundation in the principles and elements of design. The understanding of good design, taste and creativity is stressed in student projects. Students use their projects in a design show.

Basic Interior Design
10-304-125 **3 Credits**

Focuses on the basic elements, materials, and mathematics of interior design. Topics include furniture arranging and the treatment of windows, walls and floors.

Color Theory
10-304-127 **3 Credits**

Explores the basic principles of color. Color harmonies are correlated with practical problems as they apply to interior design. Students present their plans, selection of furnishings and colors for group discussion and critique.

Textiles
10-304-129 **3 Credits**

Studies textiles as they appear in interiors, taking the student from fiber to fabric. Topics include fibers, yarns, fabric construction, finishes and decorating techniques. Emphasis is on selection, care, use and textile legislation as related to the field of interior design.

Business Principles for Interior Design
10-304-135 **1 Credit**

Presents the business aspects of a career in interior design. Topics include business forms, billing procedures and business setup.

History of Furniture
10-304-144 **3 Credits**

Examines the history of art, architecture and furnishings from early Egypt through the Western World of the 20th century. Special attention is given to European court styles and the decorative arts of Colonial America.

Computer Basics for Design
10-304-150 **1 Credit**

Introduces the student to current Interior Design software used to create effective client presentations and professional portfolios. Students will get an overview of software used for 3D rendering, photo editing and presentation layouts.

Flooring
10-304-152 **1 Credit**

Helps the student with a special interest in carpet and flooring gain a further knowledge of flooring types and materials. Students practice planning layouts effectively and accurately. Selling tips are discussed.

Presentation Techniques
10-304-166 **3 Credits**

Introduces the student to a variety of techniques used in design communication. The student will learn and practice perspective drawing, illustration techniques and board layout styles. Good interior design requires adequate and appropriate methods of communication and presentation.

Drafting Skills for Interiors
10-304-167 **3 Credits**

Introduces the techniques and language of architectural drafting and construction. Basic floor plan and elevation drafting is practiced.

Marketing

Principles of Marketing 1
10-104-151 **3 Credits**

Introduces modern marketing practices. The course examines the role played by marketing in society and covers consumer motivation, market segmentation, product development, advertising and channels of distribution.

Transportation

Auto Body - Chassis & Finish

Industry Trends Vehicle Repair
10-405-119 **1 Credit**

Familiarizes students with the auto collision repair industry. Students complete written and oral reports based on information obtained from trade publications, manuals and technical newsletters.

Pre-requisite: Introduction to Collision Repair (10-405-180) OR Introduction to Auto Refinishing (10-405-181)

Introduction to Automotive Refinishing
10-405-181 **2 Credits**

Provides the learner with safety considerations and environmental regulations and how they apply to surface coating application. Emphasis is on personal protection, types of equipment operation and maintenance, and spray gun set-up and transfer efficiencies. Learners are also introduced to buffing and polishing in this course.

Collision Repair Non-Structure 1
10-405-182 **2 Credits**

Provides the learner the opportunity to develop the skills, knowledge and process of removal, replacement and storage of interior and exterior trim, disarming/arming restraint systems and adjustment to moveable glass, lamps bumpers and moveable tops.

Co-requisite: Introduction to Auto Refinishing (10-405-181) AND Auto Body Fastener Storage Kit (94-405-003)

Collision Repair Non-Structure 2
10-405-183 **2 Credits**

Provides the learner the opportunity to develop the skills required to identify different types of vehicle construction, develop a repair plan, and align bolted and moveable exterior panels while utilizing appropriate tools.

Co-requisite: Introduction to Auto Refinishing (10-405-181)

Collision Refinishing Surface Preparation
10-405-187 **2 Credits**

Teaches students to prepare surfaces to be refinished by utilizing cleaning, sanding, and masking techniques, while protecting non-refinish areas of the vehicle from overspray and component damage. Learners also develop existing finish defect and substrate assessment along with primer product choices.

Co-requisite: Introduction to Auto Refinishing (10-405-181)

Refinish and Topcoat Application
10-405-188 **3 Credits**

Covers locating and mixing automotive color formulas and procedures for applying automotive finishes, including spray gun operation and technique. Blending is also introduced in this course.

Co-requisite: Introduction to Auto Refinishing (10-405-181)

Automotive Technology

Automotive Maintenance and Light Repair 1 (AYES)
10-602-100 **4 Credits**

Focuses on developing skills in professionalism, safety, and the use of basic and power tools. Students are introduced to the automotive service industry and learn to use both comprehensive and manufacturer's service information to perform vehicle maintenance in 9 Automotive Service Excellence (ASE) areas.

Automotive Maintenance and Light Repair 2 (AYES)
10-602-101 **4 Credits**

Focuses on developing the skills needed to diagnose, service and repair vehicle braking systems with an introduction to ABS. Includes the development of skills needed to perform maintenance and repair of chassis and driveline related items.

Pre-requisite: Automotive Maintenance and Light Repair 1 (10-602-100)

Automotive Maintenance and Light Repair 3 (AYES)
10-602-102 **4 Credits**

Focuses on developing the skills needed to diagnose, service and repair electrical and electronic systems. Learners apply Ohm's Law to basic electrical circuit diagnosis. Develops skills needed to diagnose, service, and repair electrical and electronic systems, including batteries, starting, charging, and lighting systems, and computer control systems.

Pre-requisite: Automotive Maintenance and Light Repair 2 (10-602-101)

Brake Systems
10-602-104 **3 Credits**

Focuses on developing the skills needed to diagnose, service and repair vehicle braking systems with an introduction to ABS. (ABS diagnosis, service and repair will be addressed in the Advanced Chassis course.)

Pre-requisite: Completion of Bennett Mechanical Assessment w/ score of >=27% OR completion of Science Principles for Transportation (10-806-175); ACCUPLACER Reading >= 47 OR ACT Reading >= 15; Co-requisite: Automotive Service Fundamentals (10-602-107)

Automotive Maintenance and Light Repair 4 (AYES)
10-602-105 **4 Credits**

Focuses on developing the skills needed to diagnose, service and repair steering and suspension systems including wheel alignment procedures. Course includes maintenance and light repair of hybrid vehicles, heating, ventilation, and air conditioning as well as supplemental inflatable restraints.

Pre-requisite: Automotive Maintenance and Light Repair 3 (10-602-102)

Automotive Service Fundamentals
10-602-107 **2 Credits**

Focuses on developing skills in professionalism, safety, and the use of basic and power tools in accordance with industry standards. Students are introduced to the automotive service industry and learn to use both comprehensive and manufacturer's service information to perform basic under-hood and under-car services.

Pre-requisite: Completion of Bennett Mechanical Assessment with a score of 27% or greater OR completion of Science Principles for Transportation (10-806-175); ACCUPLACER Reading >= 47 OR ACT Reading >= 15; Co-requisite: Automotive Uniform (94-602-001)

Automotive MLR Internship 1
10-602-108 **1 Credit**

Provides students with work experience on actual vehicles in area shops.

Co-requisite: Automotive Maintenance and Light Repair 1 (10-602-100) OR Automotive Maintenance and Light Repair 2 (10-602-101)

Automotive MLR Internship 2
10-602-110 **1 Credit**

Provides students with work experience on actual vehicles in area shops.

Co-requisite: Automotive Maintenance and Light Repair 3 (10-602-102) OR Automotive Maintenance and Light Repair 4 (10-602-105)

Steering & Suspension Systems
10-602-124 **3 Credits**

Focuses on developing the skills needed to diagnose, service and repair steering and suspension systems including wheel alignment procedures.

Pre-requisite: Bennett Mechanical Assessment score of >=27% or completion of Science Principles for Transportation (10-806-175); ACCUPLACER Reading >= 47 OR ACT Reading >= 15; Co-requisite: Automotive Service Fundamentals (10-602-107) OR Introduction to Automotive Refinishing (10-405-181)

Electrical & Electronic Systems 1
10-602-125 **2 Credits**

Focuses on developing the skills needed to diagnose, service and repair electrical and electronic systems. Learners apply Ohm's Law to basic electrical circuit diagnosis.

Pre-requisite: Completion of Bennett Mechanical Assessment w/ score of >=27% OR completion of Science Principles for Transportation (10-806-175); ACCUPLACER Reading >= 47, ACT Reading >= 15; Co-requisite: Automotive Service Fundamentals (10-602-107), Introduction to Automotive Refinishing (10-405-181); and Automotive Elec Kit (94-602-002)

Electrical & Electronic Systems 2
10-602-127 **3 Credits**

Focuses on developing the skills needed to diagnose, service, and repair electrical and electronic systems, including batteries, starting, charging, and lighting systems, and computer control systems.

Pre-requisite: ACCUPLACER Reading >= 47 OR ACT Reading >= 15; Automotive Service Fundamentals (10-602-107); Co-requisite: Electrical & Electronic Systems 1 (10-602-125)

Science Principles for Transportation
10-806-175 **3 Credits**

Introduces the physics principles involved with technical measurement, force application, fluid properties, heat and electricity. Emphasizes problem-solving skills, teamwork and the application of scientific principles in the transportation industry.

Co-requisite: Math for the Trades (31-804-307) OR College Technical Math 1/1A (10-804-115 / -113) or College Mathematics (10-804-107)

General Studies

College Skills

College Success: On Course
10-890-100 **1 Credit**

This course prepares students for the unexpected ways in which college differs from other levels of schooling, and sharpens skills that are easily transferable to work, home and career. Students learn proven tools, tips and techniques that make the goal of college completion easier, more fun, and more personally rewarding. The best time to take this is first semester.

Communication Skills

English Composition 1
10-801-136 **3 Credits**

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.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Written Communication
10-801-195 **3 Credits**

Teaches the writing process which includes prewriting, drafting and revising. Through writing assignments, students analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Class sessions and assignments involve giving oral presentations and using computers.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Oral/Interpersonal Communication
10-801-196 **3 Credits**

Focuses on developing various communication skills including speaking and listening. Students practice intrapersonal/interpersonal and nonverbal communication skills through oral presentations, group activities and written projects.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Speech
10-801-198 **3 Credits**

Covers the fundamentals of oral presentation, topic selection, audience analysis, speech organization, research, evidence and support, delivery, evaluation, listening and group problem solving.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Mathematics

College Mathematics
10-804-107 **3 Credits**

Designed to review and develop fundamental concepts of mathematics pertinent to the areas of arithmetic and algebra; geometry and trigonometry; and probability and statistics. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections, and using calculators.

Pre-requisite: ACCUPLACER Arithmetic >= 65 OR ACT Math >= 18

College Technical Math 1A
10-804-113 **3 Credits**

Included topics are solving linear, quadratic, and rational equations; 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 Math 1A and College Technical Math 1B is the equivalent of College Technical Math 1.

Pre-requisite: ACCUPLACER Arithmetic >= 65 OR ACT Math >= 18

College Technical Math 1B
10-804-114 **2 Credits**

Continuation of College Technical Math 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 College Technical Math 1A and College Technical Math 1B is the equivalent of College Technical Math 1.

Pre-requisite: College Technical Math 1A (10-804-113)

College Technical Math 1
10-804-115 **5 Credits**

Includes solving linear, quadratic, and rational equations; graphing; formula rearrangement; solving systems of equations; percents; proportions; measurement systems; computational geometry; right and oblique triangle trigonometry; trigonometric functions on the unit circle; and operations on polynomials. Emphasis will be on the application of skills to technical problems. This course is the equivalent of successful completion of College Technical Math 1A and College Technical Math 1B.

Pre-requisite: ACCUPLACER Arithmetic >= 65 OR ACT Math >= 18

College Technical Math 2
10-804-116 **4 Credits**

Included topics are vectors; trigonometric functions and their graphs; identities; exponential and logarithmic functions and equations; radical equations; equations with rational exponents; dimension of a circle; velocity; sine and cosine graphs; complex numbers in polar and rectangular form; trigonometric equations; conic sections; and analysis of statistical data. Emphasis will be on the application of skills to technical problems.

Pre-requisite: College Technical Math 1 (10-804-115) or College Technical Math 1B (10-804-114)

Math for Natural Resources Common Topics
10-804-117 **2 Credits**

Includes real numbers, linear equations, rate, ratio, proportion, percent, measurement systems, computational geometry and right-triangle trigonometry. Emphasis is on applied problems from the field of natural resources (surveying, water treatment, forestry, plant and wild life management).

Pre-requisite: ACCUPLACER Arithmetic >= 65 OR ACT Math >= 18; Co-requisite: Natural Resources Common Topics (10-057-143)

Math with Business Applications
10-804-123 **3 Credits**

Covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuities, applying math concepts to the purchasing/buying process, applying math concepts to the selling process, and basic statistics with business/consumer applications.

Pre-requisite: ACCUPLACER Arithmetic >= 65 OR ACT Math >= 18

Introductory Statistics
10-804-189 **3 Credits**

Teaches students to display data with graphics, describe distributions with numbers, perform correlation and regression analyses, and design experiments. Students use probability and distributions to make predictions, estimate parameters and test hypotheses. They also draw inferences about relationships including ANOVA.

Pre-requisite: ACCUPLACER Arithmetic >= 65 OR ACT Math >= 18

Pre-Algebra
10-834-109 **3 Credits**

Provides an introduction to algebra. Includes operations on real numbers, solving linear equations, percent and proportion, and an introduction to polynomials and statistics. *This course does not count toward program degree completion.*

Math for the Trades
31-804-307 **2 Credits**

Focuses on the math skills needed for various trades. Topics include arithmetic fundamentals, percent and proportion applications, the metric system, conversions, practical geometry, measurement applications, signed numbers and formula evaluation. Micrometer, equation solving and standard rule measurement units are included as needed. Scientific calculator use is introduced as needed.

Natural Science

Beginning Laboratory Science
10-506-101 **3 Credits**

Introduces the learner to beginning laboratory concepts and procedures. Emphasis will be on general laboratory safety, basic laboratory equipment utilization and calibration techniques. An introduction to scientific inquiry will be addressed. Proper techniques in documentation as it relates to quality control in verification of a quality system will be introduced. Concepts in data analysis will be reviewed as it relates to creation of a laboratory notebook.

Pre-requisite: ACCUPLACER Reading >= 80 & Sentence >= 83 & Arithmetic >= 65 OR ACT English/Math >= 18 & Reading >= 20

General Biology
10-806-114 **4 Credits**

Introduces general biological concepts and principles. Emphasis is on cell structure and function, genetics, evolution and taxonomical relationships. Consideration is also given to diversity among the various kingdoms. This course emphasizes an environmental perspective and is suitable for students in Natural Resources, Early Childhood Education, Laboratory Science, Forensic Science and others interested in environmental biology.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

General Chemistry
10-806-134 **4 Credits**

Covers inorganic chemistry and basic organic chemistry. Topics include metrics, problem solving, atomic structure, chemical reactions, solutions and concentrations, ionization, pH and organic compounds.

Pre-requisite: ACCUPLACER Algebra >= 51 OR ACT Math >=18

General Anatomy & Physiology
10-806-177 **4 Credits**

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.

Pre-requisite: ACCUPLACER Reading >= 80 OR ACT Reading >= 20; ACCUPLACER Sentence >= 83 OR ACT English >=18; Two semesters of high school chemistry or General Chemistry (10-806-134) with grade of C or better

Intro to Biochemistry
10-806-186 **4 Credits**

Provides students with skills and knowledge of organic and biological chemistry necessary for application within Nursing and other Allied Health careers. Emphasis is 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.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18; Two semesters of high school chemistry or General Chemistry (10-806-134) with grade of C or better

Basic Anatomy
10-806-189 **3 Credits**

Examines concepts of anatomy and physiology as they relate to health careers. Learners correlate anatomical and physiological terminology to all body systems.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Social Science

Think Critically & Creatively
10-809-103 **3 Credits**

Provides instruction in the vital, realistic and practical methods of thinking which are in high demand in all occupations of substance today. Decision making, problem solving, detailed analysis of ideas, troubleshooting, argumentation, persuasion, creativity, setting goals and objectives, and more are considered in-depth as the student applies specific thinking strategies and tools to situations in a wide variety of workplace, personal, academic and cultural situations.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Leadership as an Art

10-809-110 **3 Credits**

Focuses on the development of leadership abilities. Students create a personal philosophy of leadership and discuss moral and ethical responsibilities. Through study and observation of great leaders plus hands-on activities, students develop fundamental concepts of leadership.

Marriage and Family
10-809-128 **3 Credits**

This course introduces the student to the sociological aspects of marriage and family life in a contemporary American society. Emphasis is on the study of cognitive, emotional, and behavioral patterns associated with courtship, love, mate selection, sexuality, and marriage. Diversity in family structure is also introduced.

Abnormal Psychology
10-809-159 **3 Credits**

Focuses on a broad description of psychological disorders such as psychosis, neurosis and personality problems. It is geared toward an understanding of the deeper level forces and adjustment problems that create mental and emotional stress. Students prepare to recognize and deal with persons with mental dysfunctions.

Pre-requisite: Introduction to Psychology (10-809-198) or Psychology of Human Relations (10-809-199)

Introduction to Ethics: Theory & App
10-809-166 **3 Credits**

Provides a basic understanding of ethical theories and uses diverse ethical perspectives 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.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Introduction to Diversity Studies
10-809-172 **3 Credits**

Develops workplace skills needed to work with diverse groups of people. Ethnic relations are studied in global and comparative perspectives. Students examine their biases and gain awareness of differences and common ground shared. The course emphasizes how personal and cultural diversity enhances the effectiveness of work groups.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Developmental Psychology
10-809-188 **3 Credits**

Studies human development across the lifespan from conception through old age and death. It focuses on the physical, intellectual, social, emotional and moral development of a person and presents the normal range of responses, reactions and behaviors of age-related development. It also helps students to distinguish what might be considered dysfunctional.

Pre-requisite: Intro to Psychology (10-809-198)

Economics
10-809-195 **3 Credits**

Provides a foundation of economic concepts and institutions so that students can apply economic thinking to their own decisions as consumers, employees and citizens in a market-oriented economic system. Topics include supply and demand, employment, prices and production, fiscal policy, monetary policy, market structures, and international trade and finance.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Introduction to Sociology

10-809-196 **3 Credits**

Focuses on the basic concepts of the intercultural discipline of sociology. Emphasis is placed on culture, socialization and social stratification. The course also looks at five institutions: family, politics, economics, religion and education. Additional topics include demography, deviance, technology, environmental social issues, and social change and organization.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Contemporary American Society **3 Credits**
10-809-197

Analyzes public policy issues relating to government, media, education, family and the workplace. This course also looks at the impact of global, multicultural and technological trends on American life and explores these issues by using critical thinking skills, advocating points of view, and participating in political processes.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Introduction to Psychology
10-809-198 **3 Credits**

Focuses on the theoretical foundation of human functioning and looks at learning, motivation, emotions, personality, deviance and pathology, physiological factors and social influences. Students consider the complexities of human relationships in personal, social and vocational settings.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Psychology of Human Relations
10-809-199 **3 Credits**

Explores the relationship between the general principles of psychology and people's everyday lives. Students seek a deepened sense of awareness of themselves and others, and to improve their relationships at work, in the family and in society.

Pre-requisite: ACCUPLACER Reading >= 54 & Sentence >= 83 OR ACT Reading/English >= 18

Global Studies / Foreign Languages

Global Studies / Foreign Languages

Global Business Fundamentals
10-138-150 **3 Credits**

Provides the opportunity to develop the knowledge, skills and understanding of global business foundations, global business environments, organizing and managing global business, marketing in a global economy and global financial management.

Spanish 1 for Culinary Arts
10-141-100 **3 Credits**

An introduction to the Spanish language focusing on terminology as it pertains to communicating culinary and restaurant tasks. Upon completion of this course, the participant will have the basic ability to understand spoken Spanish, deliver basic job related commands, explain simple culinary/restaurant procedures, and gain insight into culture as it relates to interacting with Spanish speakers.

Spanish 1 for Health Care
10-141-110 **3 Credits**

Students learn basic phrases and questions necessary for health care tasks. Upon completion, the participant will have the basic ability to understand spoken Spanish, gain insight into cross-cultural issues as well as to express and obtain explanations of common symptoms, the nature and the duration of an illness and obtain patient vitals.

Spanish 2 for Health Care
10-141-111 **3 Credits**

Presents more complex phrases, questions and in-depth vocabulary for health-related tasks. At the conclusion of this course, the participant will have the ability to understand more complex spoken Spanish, gain further insight into cross-cultural issues as well as to obtain information about more complex health symptoms and illnesses. Spanish 1 Health Care (10-141-110) or consent of instructor is required.

Spanish 3 for Health Care **3 Credits**
10-141-112

A continuation of Spanish 2 Health Care (10-141-111) presents increasingly complex phrases, grammar and in-depth vocabulary for health-related tasks. Students will understand and express complex spoken Spanish as it relates to health care, gain awareness of cross-cultural issues as well as obtain information about more specific health-related symptoms and illnesses. Spanish 2 Health Care (10-141-111) or consent of instructor is required.

Spanish 4 for Health Care
10-141-113 **3 Credits**

A continuation of Spanish 3 Health Care (10-141-112) presents increasingly complex phrases, grammar and vocabulary. Students will understand and express more complex health-related Spanish including identifying more symptoms and illnesses and further study of cross-cultural topics. A capstone course which focuses on practice and application of concepts learned in Spanish Health Care 1-3. Spanish 3 Health Care (10-141-112) or consent of instructor is required.

Spanish 1 Law Enforcement
10-141-115 **3 Credits**

Students learn basic phrases and questions to carry out law enforcement protocols. The participant will have the basic ability to understand spoken Spanish, obtain basic job related information, identify individuals, time and date of incidents, obtain descriptions, and express commands.

Hmong 1
10-141-136 **3 Credits**

Establishes a foundation in Hmong language, focusing on language of common, everyday situations. Expands on vocabulary, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

Hmong 2 **3 Credits**
10-141-137

Builds on a foundation in the Hmong language presenting everyday situations and focuses on vocabulary expansion, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

Hmong Advanced Conversation
10-141-138 **3 Credits**

Further develops learners' Hmong reading, writing, listening and speaking skills. Completion of this course focused on speaking skills will enable students to gain knowledge and skills necessary to effectively engage in verbal communication on a variety of topics. Completion of Hmong 2 or instructor consent required.

Global Understanding
10-141-158 **3 Credits**

Develop global perspectives while acquiring skills to effectively work in global environments. Learners compare and contrast patterns of work related practices. Topics include the impact of geography, history, religion, and politics in shaping behaviors and social interactions like; non-verbal communication, negotiating, conflict management, team work, decision making and motivation.

Spanish 1
10-802-100 **3 Credits**

Presents an introductory approach to conversation using everyday work and social situations. This course provides students with the basic vocabulary, grammar, and cultural understanding needed for interacting with Spanish speakers at home and abroad.

Spanish 2
10-802-101 **3 Credits**

Enables students to advance their conversational skills in realistic work and social environments while further developing cross-cultural insights needed for successful interactions with Spanish-speaking people both at home and abroad.

Spanish 3
10-802-102 **3 Credits**

In this continuation of Spanish 2, students develop additional communicative and written skills in real-life situations and gain a better understanding of the Spanish-speaking cultures of the world in relationship to their own.

Spanish 4
10-802-103 **3 Credits**

As a continuation of Spanish 3, students will continue to increase vocabulary, refine communicative skills, and further study cultural topics. Principles of grammar are systematically reviewed focusing on the use of the present, past and future tenses.

Spanish 5
10-802-104 **3 Credits**

A continuation of Spanish 4. Principles of grammar are systematically reviewed with emphasis on the use of the past, future and subjunctive verb tenses. Students will continue to expand their vocabulary and develop their oral and listening skills. Culture will also be discussed.

Spanish for True Beginners
10-802-106 **1 Credit**

Teaches the basics of meeting and greeting, pronunciation and fundamentals of Spanish sentence structure. Useful words and expressions will boost ability and confidence to communicate in Spanish. Culturally relevant topics will be covered. No previous Spanish language experience needed.

Spanish Conversation Intermediate
10-802-110 **2 Credits**

Designed for students and professionals who have attained an intermediate level of Spanish at FVTC or elsewhere, desiring to practice and enhance their conversational ability. Upon completion of the course, students will speak Spanish at an intermediate level with increasing comfort and effectiveness. Completion of Spanish 3 or consent of instructor is required.

Arabic 1
10-802-114 **3 Credits**

Establishes a foundation in Arabic language, focusing on language of common, everyday situations. Expands on vocabulary, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

Arabic 2
10-802-115 **3 Credits**

Builds on a foundation in Arabic 1, presenting the language of everyday situations, and focuses on vocabulary expansion, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

Chinese Mandarin 1
10-802-117 **3 Credits**

Establishes a foundation in the Mandarin Chinese language presenting everyday situations. It focuses on vocabulary building, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

French 1
10-802-118 **3 Credits**

Establishes a foundation in the French language presenting everyday situations. It focuses on vocabulary building, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

German 1
10-802-119 **3 Credits**

Establishes a foundation in the German language presenting everyday situations. It focuses on vocabulary building, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

Italian 1
10-802-120 **3 Credits**

Establishes a foundation in the Italian language presenting everyday situations. It focuses on vocabulary building, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

French 2
10-802-121 **3 Credits**

Builds on a foundation in the French language presenting everyday situations and focuses on vocabulary expansion, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

Chinese Mandarin 2
10-802-122 **3 Credits**

Builds on a foundation in the Chinese Mandarin 1, presenting the language of everyday situations and focuses on vocabulary expansion, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

French 3
10-802-124 **3 Credits**

Expands on fundamentals of French grammar and communication addressed in French 2 and further develops learners' reading, writing, listening and speaking skills. Enables students to learn how to effectively engage in work-related communication and introduces French for special purposes. French 2 or consent of instructor is required.

French Advanced Conversation
10-802-125 **3 Credits**

Further develops learners' reading, writing, listening and speaking skills in French. Completion of this course focused on speaking skills will enable students to gain the knowledge and skills necessary to effectively engage in verbal communication on a variety of topics. Completion of French 2, French 3, or instructor consent required.

German 2
10-802-126 **3 Credits**

Builds on a foundation in German 1, presenting the language of everyday situations and focuses on vocabulary expansion, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

German 3
10-802-127 **3 Credits**

Expands on fundamentals of German grammar and communication addressed in German 2 and further develops learners' reading, writing, listening and speaking skills. Enables students to learn how to effectively engage in work-related communication and introduces German for special purposes. German 2 or consent of instructor is required.

German Advanced Conversation
10-802-128 **3 Credits**

Further develops learners' German reading, writing, listening and speaking skills. Completion of this course focused on speaking skills will enable students to gain knowledge and skills necessary to effectively engage in verbal communication on a variety of topics. Completion of German 2, 3, German Intermediate Conversation or instructor consent required.

Chinese Mandarin Advanced Conversation
10-802-129 **3 Credits**

Further develops learners' Chinese reading, writing, listening and speaking skills. Completion of this course focused on speaking skills will enable students to gain knowledge and skills necessary to effectively engage in verbal communication on a variety of topics. Completion of Chinese 2, 3, Chinese Intermediate Conversation or instructor consent required.

Italian 2
10-802-180 **3 Credits**

Builds on a foundation in Italian 1, presenting the language of everyday situations and focuses on vocabulary expansion, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

Italian 3
10-802-181 **3 Credits**

Expands on fundamentals of Italian grammar and communication addressed in Italian 2 and further develops learners' reading, writing, listening and speaking skills. Enables students to learn how to effectively engage in work-related communication and introduces Italian for special purposes. Italian 2 or consent of instructor is required.

Italian Advanced Conversation
10-802-182 **3 Credits**

Further develops learners' Italian reading, writing, listening and speaking skills. Completion of this course focused on speaking skills will enable students to gain knowledge and skills necessary to effectively engage in verbal communication on a variety of topics. Completion of Italian 2, 3, Italian Intermediate Conversation or instructor consent required.

Japanese 1
10-802-183 **3 Credits**

Establishes a foundation in Japanese language, focusing on language of common, everyday situations. Expands on vocabulary, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

Japanese 2
10-802-184 **3 Credits**

Builds on a foundation in Japanese 1, presenting the language of everyday situations and focuses on vocabulary expansion, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

Japanese Advanced Conversation
10-802-186 **3 Credits**

Further develops learners' Japanese reading, writing, listening and speaking skills. Completion of this course focused on speaking skills will enable students to gain knowledge and skills necessary to effectively engage in verbal communication on a variety of topics. Completion of Japanese 2, 3, Japanese Intermediate Conversation or instructor consent required.

Polish 1
10-802-187 **3 Credits**

Establishes a foundation in Polish language, focusing on language of common, everyday situations. Expands on vocabulary, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

Polish 2
10-802-188 **3 Credits**

Builds on a foundation in Polish 1, presenting the language of everyday situations and focuses on vocabulary expansion, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

Portuguese 1
10-802-190 **3 Credits**

Establishes a foundation in Portuguese language, focusing on language of common, everyday situations. Expands on vocabulary, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

Portuguese 2
10-802-191 **3 Credits**

Builds on a foundation in Portuguese 1, presenting the language of everyday situations and focuses on vocabulary expansion, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

Russian 1
10-802-193 **3 Credits**

Establishes a foundation in Russian language, focusing on language of common, everyday situations. Expands on vocabulary, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

Russian 2
10-802-194 **3 Credits**

Builds on a foundation in Russian1, presenting the language of everyday situations and focuses on vocabulary expansion, basic grammar, word recognition and usage, conversation, and understanding of culture and tradition.

Russian 3
10-802-195 **3 Credits**

Expands on fundamentals of Russian grammar and communication addressed in Russian 2 and further develops learners' reading, writing, listening and speaking skills. Enables students to learn how to effectively engage in work-related communication and introduces Russian for special purposes. Russian 2 or consent of instructor is required.

Japanese Intermediate Conversation
10-802-196 **3 Credits**

Expands on the fundamentals of level 2 grammar and communication and further develops learners' reading, writing, listening and speaking skills in conversational Japanese. Completion of this course will enable students to gain the knowledge and skills necessary to effectively engage in communication. Completion of Japanese 2 or 3, or consent of instructor is required.

Definitions

Accuplacer – Assessment exam required for admission into many Fox Valley Technical College programs and as a pre-requisite for registration into certain classes.

Admission application – A student must submit an admission application (usually online) in order to gain admission into a Fox Valley Technical College program. Youth Options students are required to apply for Nursing Assistant and EMT-Basic programs.

Bennett Mechanical Comprehensive Test – Assessment exam required for admission to automotive technology programs and as a pre-requisite for certain automotive classes.

Catalog number – The eight-digit number that identifies the series of classes for a specific subject. This is the number we will be using to search for Youth Options classes.

Co-requisite – A requirement that must be completed either before or at the same time as the course (i.e. another course).

Department of Public Instruction form A (PI8700-A) – Youth Options students need to complete and return this form to their high school before registering for classes.

Pre-requisite – A requirement that must be completed before registering into the course (i.e. another course, test scores, admission into a program, etc.)

Term – FVTC has three separate terms per year: Spring, Summer, and Fall. Students are eligible to take courses through Youth Options during the Spring and Fall terms.