COURSE DESCRIPTIONS

2024-2025

Western Technical College

WESTERNTC.EDU
800-322-9982

2D Architectural Drafting Technology **10304130** **2 Credits**
Architectural graphic and drafting standards are applied to develop, analyze and review detailed construction documentation using emerging technological software. Techniques include the creation of the building information model, family's usage and sheet layouts.

3D Architectural Drafting Technology **10304136** **2 Credits**
Building upon knowledge and skills earned in 2D technology, 3D technology is employed to create images used in building powerful design presentations.

3D Modeling for BSEM **10481115** **1 Credits**
Students will learn the basics of 3-D modeling using SketchUp or a similar program. They will create models that can be used in energy modeling.

3D Printing **10664125** **1 Credits**
This course will introduce rapid prototyping as it relates to the prototype design of parts. Basic components will be designed and built using an additive process. The course will culminate in the design and manufacture of a robotic end effector that will manipulate a predetermined item.

AC Circuits Analysis **10660118** **2 Credits**
This course provides an introduction to the fundamental concepts of AC circuits. Topics include sine wave, alternating voltage, period, frequency, RMS, peak and peak-to-leak values of an AC waveform, comprehensive coverage of the use of the scopemeter to analyze transformers, capactive reactiance, inductive reactance, seires and parallel RC and RL circuits. An introduction to three phase power and power factor is also included.

ADV. PRE-HOSPITAL PHARMACOLOGY **10531914** **3 Credits**
This course provides the paramedic student with the comprehensive knowledge of pharmacology required to formulate and administer a pharmacological treatment plan intended to mitigate emergencies and improve the overall health of the patient.

ARRT Certification Seminar **10526174** **2 Credits**
Provides preparation for the national certification examination prepared by the American Registry of Radiologic Technologists (ARRT). Emphasis is placed on the weak areas of the individual students. Simulated registry examinations are utilized.

Abnormal Psychology **10809159** **3 Credits**
The course in Abnormal Psychology surveys the essential features, possible causes, and assessment and treatment of the various types of abnormal behavior from the viewpoint of the major theoretical perspectives in the field of abnormal psychology. Students will be introduced to the diagnosis system o f the Diagnostic and Statistical Manual of Mental Disorders. In addition, the history of the psychology of abnormality will be traced. Cultural and social perspectives in understanding and responding to abnormal behavior will be explored as well as current topics and issues within abnormal psychology.

Abnormal Psychology **20809237** **3 Credits**
Abnormal Psychology covers the definition of abnormal behavior, assessment techniques, and descriptions of psychological disorders. It examines theoretical perspectives (biological, psychological, sociocultural) and approaches to treating these disorders.

Accounting Career Foundations **10101170** **3 Credits**
Learner explores the professional expectations of the accounting field including business ethics, customer service, team work, and working collaboratively. Throughout the course the learner will develop a career plan for a professional accounting position. The career plan includes preparing an accounting specific resume and cover letter, building a professional social network profile, participating in job interviews, exploring professional experiences in the community, and exploring educational opportunities in the accounting field.

Accounting Exploration **10101100** **3 Credits**
The learner will develop skills to enhance their success in the Accounting or Accounting Assistant program. These skills include self-assessment, time management, study skills, learning styles, active reading, communication skills, and career development. Learner will review program and course competencies, course sequencing, and available college resources. An introduction to career opportunities in the accounting field will be explored.

Accounting Principles 1 **10101114** **4 Credits**
This course introduces Generally Accepted Accounting Principles (GAAP). Using double-entry accounting, learners will study the accounting cycle for service and merchandising businesses. Additionally, learners will study special journals, internal controls, accounts and notes receivable and merchandise inventory.

Accounting Principles 2 **10101124** **4 Credits**
This course presents basic concepts for partnerships and corporations. The learner will study accounting procedures for corporate stock, dividends, retained earnings, liabilities, investments, fixed assets, and periodic inventory. The learner will apply knowledge in the completion of two simulations.

Accounting Principles 3 **10101126** **4 Credits**
Designed for Accounting majors to further develop understanding of accounting practices. This course includes an extensive application of generally accepted accounting principles (GAAP) and a study of relevant developments and pronouncements in accounting practices as they relate to ethics, budgets, preparation and interpretation of financial statements, and the valuation and presentation of accounting theories and concepts.

Accounting Spreadsheets **10101138** **3 Credits**
Using Microsoft Excel, the learner will utilize the menu structure and basic commands of an electronic spreadsheet. Spreadsheet applications will be directly related to solving accounting problems, formatting accounting information, and creating accounting reports.

Activity Analysis and Applications **10514173** **2 Credits**
Provides instruction in activity analysis with hands on experience in activities across the lifespan. Students apply the teaching / learning process and adhere to safety regulations.

Additive Manufacturing **10606220** **1 Credits**
Requires the learner to apply additive technologies through a rapid prototyping model to make products/parts that meet required specifications.

Admin & Org of Health Care **10160131** **3 Credits**
Focuses on the administration and organization of health care delivery systems utilized in a variety of settings such as hospitals, clinics and nursing homes. Examines health care planning, regulations, political impact and major health care issues including law and ethics for the health professions. Includes brief discussion on health care systems in other industrialized countries and differences in health status and expenditures.

Admin Professional Field Study **10106137** **1 Credits**
Students work in an office directly related to their educational training for a minimum of 72 hours under direct supervision of their internship instructor and internship site supervisor. Students share workplace experiences and discuss related office topics.

Administration Prof Portfolio **10106181** **2 Credits**
This course, designed for students in the Administrative Professional program, focuses on reinforcing and applying previously learned skills (problem-solving, work organization, team working, and other office skills) common to business and office applications.

Administration of Estates **10110114** **3 Credits**
Each learner will demonstrate the application of the estate planning process including wills, trusts, estates and advanced directives. Students will learn the path of the probate process with the Wisconsin laws as the primary focus. This course also covers intestacy issues and probate forms and procedures used in probate administration.

Adobe Illustrator **10201109** **3 Credits**
Students will use a popular vector illustration program to create illustrations, logos, and graphics within a design or graphics production environment.

Adobe Photoshop **10201185** **3 Credits**
This course teaches image manipulation using the industry leading Adobe Photoshop software. Projects will be designed through image compositing, color correction, and file set-up and output. This course uses Macintosh computers; previous Macintosh experience will be helpful.?

Adv Anatomy & Physiology **10806179** **4 Credits**
Advanced Anatomy and Physiology is the second semester in a two-semester sequence in which normal human anatomy and physiology are studied using a body systems approach with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. Instructional delivery within a classroom and laboratory setting. Experimentation within a science lab will include analysis of cellular metabolism, the individual components of body systems such as the nervous, neuro-muscular, cardiovascular, and urinary. Continued examination of homeostatic mechanisms and their relationship to fluid, electrolyte, acid-base balance and blood. Integration of genetics to human reproduction and development are also included in this course.

Adv Emergency Resuscitation **10531918** **1 Credits**
By teaching Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS) methodologies and protocols, this course prepares the paramedic student in the integration of comprehensive knowledge of causes and pathophysiology into the management of shock, respiratory failure, respiratory arrest, cardiac arrest, and peri- arrest states with an emphasis on early intervention to prevent respiratory and / or cardiac arrest if possible.

Adv. PLC Programming **10620139** **2 Credits**
Hardware and software found in RSLogix 5000 Programmable Logic Controllers are presented. Tag based programming will be used and applied in ladder logic programs. Other programming languages that will be explored include Function Block and Structured Text.

Adv. Patient Assess Principles **10531913** **3 Credits**
This course teaches the paramedic student to integrate scene and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. By utilizing a structured and organized assessment process with knowledge of anatomy, physiology, pathophysiology, life span development, and changes that occur to the human body with time, the students will learn to develop a list of differential diagnoses through clinical reasoning, along with the ability to modify the assessment as necessary to formulate a treatment plan for their patients.

Advanced BIM **10614171** **2 Credits**
This course will focus on advanced BIM techniques, with a particular emphasis on creating families. Students will learn advanced modeling techniques and strategies for creating custom families in BIM software, as well as scheduling and information extraction techniques. They will also explore best practices for using BIM software in architectural design workflows, including integration with other design tools and BIM work- sharing with other members of the design team.

Advanced Bio-Med Internship **10605212** **2 Credits**
In a working clinical environment, mentored by professional biomedical technicians, students will practice typical HTM (Healthcare Technology Equipment) activities. These activities will include: observation of or assistance to working technicians, investigation/maintenance/repair of medical equipment, professional documentation of activities, and adherence to standard practices.

Advanced Bio-Medical Internship **10605208** **3 Credits**
In a working clinical environment, mentored by professional biomedical technicians, students will practice typical HTM (Healthcare Technology Equipment) activities. These activities will include: observation of or assistance to working technicians, investigation/maintenance/repair of medical equipment, professional documentation of activities, and adherence to standard practices. Students will also prepare for a CBET (Certified Biomedical Equipment Technician) practice exam focusing on solidifying program knowledge base in electronics, codes/standards/safety practices, computers/networking, anatomy/physiology, medical equipment, communications, and HTM problem solving.

Advanced Circuits **10662105** **3 Credits**
Advanced circuit analysis concepts and techniques that are used by electronic engineering technologists are emphasized in this course. Advanced AC complex number-based circuit analysis techniques are applied to series-parallel circuits, superposition, complex power, nodal analysis, Thevenin's and Norton's theorems, ideal operational amplifier circuits, circuits containing equivalent circuit models of sensors and actuators, frequency response analysis, and balanced three-phase circuits. Laboratory, simulation, and documentation experiences reinforce the lecture material.

Advanced EMT **30531303** **4 Credits**
This course expands on the EMT- Basic curriculum. Advanced patient assessment knowledge and skills will be integrated throughout course as well as critical decision making. Skills include IV access and fluid therapy as well as administration of aspirin, 50% dextrose, narcan, atrovent, epinephrine, glucagon and nitroglycerine.

Advanced Electronics **10662106** **3 Credits**
his course covers advanced topics associated with the analysis of electronic devices and circuits. Fundamental mathematical modeling and applications of solid-state devices and operational amplifiers include device characteristics of p-n junction diodes, bipolar junction transistors (BJT), and metal oxide semiconductor field effect transistors (MOSFET); analysis of diode circuits, linear power supplies, and transistor switching circuits; and an introduction to design in the context of single-stage MOSFET amplifiers and operational amplifiers in standard configurations. Laboratory, simulation, and documentation experiences reinforce the lecture material.

Advanced Firefighter Agility Assessment **10503137** **1 Credits**
Advancing on the objectives of Firefighter Agility Assessment, this course helps students maintain and improve fitness assessment scores. Fire protection students will assess their level of fitness and wellness and develop a plan to achieve improved fitness assessment levels. Students will participate in exercise labs that will improve their Firefighter Agility Assessment.

Advanced Hematology **10513130** **2 Credits**
This course explores mechanisms involved in the development of hematological disorders. Emphasis is placed upon laboratory techniques used to diagnose disorders and monitor treatment.

Advanced Horticulture Practice **10001140** **2 Credits**
Dive deep into the world of advanced horticulture and master the techniques that set professionals apart. In this course, students will gain hands-on experience in interpreting pesticide labels, calibrating equipment, applying pesticides safely, mastering pruning techniques, manipulating plant growth, and more. By the end of the course, students will be equipped with the skills and knowledge to excel in the horticultural industry, ensuring plants thrive and environments are protected.

Advanced IO Device Applications **10664111** **2 Credits**
This course includes coverage of Advanced PLC input and output devices. Learners will integrate smart sensors, stack lights, barcode readers, and vision systems with a PLC and HMI. All devices will be integrated and controlled with a PLC. Data from these devices will be collected and displayed on an HMI and used to control output devices.

Advanced Microbiology **10513140** **2 Credits**
This course provides an overview of acid fast organisms, fungi, parasites, and anaerobic bacteria. The organisms, their pathophysiology, epidemiology, the diseases and conditions that they cause, laboratory methods of handling, culturing and identification will be discussed.

Advanced Professional Selling **10104163** **3 Credits**
This course focuses on a variety of strategies and techniques for professional selling including: sales presentations, exposure to the software that aids sales people, coordination with the firm's other functional areas, team selling, and negotiation. This course will help relate theory to practice and will include close work with an actual salesperson.

Advanced Radiographic Imaging **10526230** **2 Credits**
Explores the factors that impact image acquisition, display, archiving and retrieval. Guidelines for selecting exposure factors and evaluating images within digital systems are discussed. Principles of digital system quality assurance and maintenance are presented.

Advanced Robotic Fabrication **10442111** **2 Credits**
Students build upon their knowledge by learning offline programming, positioning fixtures and tooling, seam tracking, vision systems, and develop a fully functional weld program.

Advanced Spreadsheets **10106153** **3 Credits**
Students study advanced Microsoft Excel applications and apply those applications to practical business case problems.

Advanced Topics in Programming **10152113** **3 Credits**
This course covers advanced topics in programming. A broad array of topics covered may include: object-orientated design, 3-tier design, cloud hosting, web services, algorithms, performance, software testing, and version control.

Advanced Video Production **10701110** **3 Credits**
This course is designed for students who have a strong foundation in video production and are ready to take their skills to the next level. Most of the time in and out of class will be spent on a one or more projects that challenges students to define and create digital media projects. The projects will allow students to apply their video production skills and creativity to produce high-quality projects that aligns with their interests or goals.

Advanced Web Programming **10152145** **3 Credits**
This is a continuation of the Web Programming course. Topics include; advanced HTML; advanced JavaScript; scripting languages like PHP and Perl; and database integration with open-source and other databases.

Advanced Word & Desktop Publishing **10106149** **3 Credits**
Designed for students already familiar with word processing. Students will create professional-looking documents as well as professional-quality images using desktop publishing software. Students create brochures, flyers, business cards, newsletters, web pages, logos and banners. Students will also study features of Microsoft PowerPoint and advanced features of Microsoft Word.

Agribusiness Internship **10006150** **3 Credits**
Students will be responsible for selecting and securing placement with an agribusiness in a specialty area of their choice with faculty approval. These experiences will provide the student with an opportunity to acquaint themselves with real life workplace situations. This will include periodic supervision and evaluation of performance by instructional staff and employer supervisor.

Agribusiness Work Based Experience **10006151** **1 Credits**
Students will be responsible for selecting and securing placement with an agribusiness in a specialty area of their choice with faculty approval. These experiences will provide the student with an opportunity to acquaint themselves with real life workplace situations. This will include periodic supervision and evaluation of performance by instructional staff and employer supervisor.

Agricultural Business Management **10006167** **3 Credits**
Agricultural Business Management provides learner with basic business management practices including the development of a business plan, establishment of short and long range goals, identification and implementation alternatives for reaching goals, and development of strategies to monitor progress. The importance of designing a business mission statement based on goals is emphasized.

Agricultural Commodity Marketing **10006172** **3 Credits**
Operation and use of agricultural commodity markets and institutions as applied to enterprise and firm risk management. Cash markets; futures markets and futures option markets; basis; hedging and forward pricing; price discovery; fundamental analysis; technical analysis and risk management strategies. Activities of commodity futures exchanges; the mechanics of trading futures contracts; the use of futures trading for hedging and forward pricing; and options, basis behavior, and hedging strategies for selected commodities.

Air Conditioning **10601115** **3 Credits**
This course provides students with a detailed understanding of air conditioning principles and how they apply to residential, commercial, and industrial HVAC systems. Students will learn about key concepts related to heat transfer, psychrometrics, air handling units or AHUs, components of AC systems, refrigeration cycle, and relations they have in AC systems. Through lectures and laboratory sessions that simulate realistic scenarios, students will learn how to read HVAC wiring diagrams, install AC systems with quality assurance in mind, troubleshoot problematic systems using diagnostic tools, and assume compliance with relevant local and national codes and standards.

American History 1607-1865 **20803211** **3 Credits**
The origin and growth of the United States is studied. Surveys American political, economic and social development from the founding of the colonies through the civil war.

American History 1865-Present **20803212** **3 Credits**
Introductory survey course covering political, social and cultural trends in the United States between the end of the Civil War and the present. In addition to presenting what happened in the United States during this period, the course explores the diverse sources historians use to explain the past.

American Literature: 1865 - Present **20801218** **3 Credits**
Examines major authors and works form the late 19th century to the present in American prose, drama, and poetry.

American Literature: Beginnings - 1865 **20801217** **3 Credits**
Examines major authors and works from the early 16th to the late 19th century in American prose, drama, and poetry.

American National Government **20809221** **3 Credits**
Utilizes a systems approach to emphasize the relationships between structure and behavior. Stresses political theory and methodology. Students are encouraged to improve research and analytical skills. Includes the U.S. Constitution, elections, interest groups, parties, mass media, congress, judiciary, the presidency and bureaucracy.

Anatomy and Physiology I **20806207** **4 Credits**
Features lectures and laboratory dealing with the human body as an integrated structural and functional unit, including basic anatomical and directional terminology, fundamental concepts and principles of cell biology, histology, integumentary, skeletal, muscular, endocrine, and nervous systems, and the special senses. It includes dissection of various fresh and preserved materials as well as examination of a human cadaver. This course is the first semester of a two-semester sequence.

Anatomy and Physiology II **20806208** **4 Credits**
Anatomy and Physiology II features lectures and laboratory exercises dealing with the human body as an integrated structural and functional unit including the cardiovascular system, lymphatic system and immunity, respiratory system, digestive system and metabolism, urinary system, fluid/electrolyte balance and acid/base balance, and reproductive system. Note: this is the second semester course of a two-semester sequence and is not acceptable where a one-semester Anatomy and Physiology course is required.

Animal Science **10006113** **3 Credits**
This course provides fundamental knowledge of the animal science field. Topics include animal health, animal environments, anatomy and physiology, genetics and reproduction, animal feedstuffs, and job related safety. Participants will experience animal concepts through the completion of hands-on activities.

App of Prod Enterprise Infor **30090367** **3 Credits**
This course describes procedures for applying enterprise information provided by computerized analysis of farm business accounts. Students must be actively engaged in production agriculture to enroll in this course.

Appl of Financial Concepts **10114164** **3 Credits**
This is a capstone course that incorporates the financial concepts addressed in the finance program. There will be practical application projects in the areas of insurance, investing and banking. Individual student projects will require the student to apply knowledge gained throughout the program in business simulations, preparing the students for a career in finance. Public presentations are also part of this class.

Application of Investigations **30504502** **1 Credits**
Through classroom lecture, on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Phase III topics of the Department of Justice 720 Academy curriculum framework: Ethics II: Moral Reasoning and Professional Responsibility, Cultural Competence II: Fair and Impartial Policing, Interrogations, Testifying in Court, Crimes III and Physical Evidence.

Application of Traffic Response **30504507** **3 Credits**
Through classroom lecture, and on-campus lab and WI Department of Justice integration exercises, students will learn and apply skills addressed in the following Phase III topics from the WI Department of Justice 720 Academy curriculum framework: Traffic Law Enforcement- Core and Radar, Traffic Crash Investigations & Incident Management, Operating a Motor Vehicle While Intoxicated (OMVWI), Standardized Field Sobriety Tests (SFST), Hazardous Materials and Weapons of Mass Destruction (WMD), Incident Command Systems and NIMS, and Report Writing.

Applied Calculations in Engineering **10606140** **2 Credits**
Students will learn how to set up analytical and graphical problems, use multiple variable equations, convert units between angular and linear motion, and apply trigonometry to solve vector relations, including trigonometry for oblique triangles. Various software will be used including CAD, spreadsheets, and word processors to set up and solve engineering related problems.

Applied Career Skills **31890315** **1 Credits**
In this course, students will develop skills to navigate the job market in their chosen career path. Content includes career specific resume writing, preparation and practice of job interviews, and developing effective workplace communications.

Applied Communication Skills **31801330** **2 Credits**
This course treats in a practical and applied manner the spectrum of communication skills necessary to function successfully in a career field with writing fundamentals, business correspondence, telephone courtesy, listening skills, and oral communication. Also job-seeking skills: resume, letter of application and interview.

Applied Communication for Transportation **31801315** **1 Credits**
This course is designed to improve a student's speaking, writing, and listening skills and emphasis is placed on practical applications in work-related settings.

Applied Electricity in HVACR **10601119** **3 Credits**
This course is designed to provide students with advanced knowledge and skills in the field of electricity as it applies to HVAC systems. Students will dive deeper into principles of electricity, including electrical circuits, Ohm's law, power, energy, and resistance. The course will also cover various types of electrical controls used in HVAC systems, such as relays, contactors, and thermostats. Students will learn how to troubleshoot and diagnose common problems in electrical circuits and controls, and how to properly repair and maintain these systems.

Applied Math - HVAC/Refrig **31804337** **2 Credits**
The student will develop mathematical problem solving skills necessary to be successful in industry. The student will apply geometric, numeric, and measurement concepts to problems related to the fields of heating, air-conditioning, ventilation and refrigeration. Knowledge of fractions, percents, and geometry will be used to gain a deeper understanding of heat load, the gas laws, ductwork stretch-outs, electric power consumption, and basic trigonometry.

Applied Math - Transportation **31804336** **2 Credits**
The student will develop mathematical and problem solving skills necessary to be successful in industry. The student will apply geometric, numeric, and measurement concepts to problems related to the automotive trade. Knowledge of fractions, percents, and geometry will be used to gain a deeper understanding of mechanical concepts including drive ratio, engine displacement, horsepower, compression ratio and Pascal's Law.

Applied Math - Welding **31804317** **1 Credits**
Development of basic math skills needed to solve general problems encountered in industry. These include working with fractions and decimals, calculator operation, measurement and conversion, perimeter, area, volume, proportion and ratio, percents, and formulas.

Applied Math 1 - Transportation **31804310** **1 Credits**
Learners will develop mathematical and problem-solving skills necessary to be successful in the transportation industries. Course topics include fraction and decimal number calculations, measurement, ratio & proportion, percent, horsepower, torque, gear ratios and unit conversions. All topics are explored through industry-relevant applications. This course is typically taken prior to Applied Math 2- Transportation.

Applied Math 1 - Wood **31804315** **1 Credits**
Students will develop basic math skills needed to solve general problems encountered in the carpentry trades. These include working with fractions and decimals, calculator operation, measurement and conversion, perimeter, area, volume, concrete estimation, board measure and lumber pricing concepts. This course is the first in a two-part sequence.

Applied Math 2-Transportation **31804312** **1 Credits**
Building on concepts learned in Applied Math 1- Transportation, learners will develop mathematical and problem-solving skills necessary to be successful in the transportation industries. Course topics include perimeter, area, volume, engine measurements, displacement, compression ratio, hydraulic principles, efficiency, and temperature scales. All topics are explored through industry-relevant applications.

Applied SQL **10152118** **3 Credits**
This is a fundamental course in database concepts, design and implementation, for students in the Web & Software Developer Program. Students will utilize Microsoft Access to develop a general understanding and reference for relational database creation and querying. Students will then learn Structured Query Language (SQL) and utilize a database Server to create tables, write queries, and update relational databases. SQL transactions and procedures will also be implemented.

Apply Commodity Mkt Fund **30090337** **3 Credits**
This course is designed to teach students to apply the various methods and tools to market farm commodities.

Aquaculture **10090115** **2 Credits**
This course will investigate hydroponic plant growing and fish farming operations; designs, suitable species, maintenance, costs efficiencies and yields. Plan a system, develop a budget, explore markets, trends, and analyze benefits and obstacles in this business.

Arch Bldg Info Mgmt **10614136** **2 Credits**
This course is intended to introduce architectural students and experienced architectural drafters to the next generation in architectural design software. Students will study the process of blending traditional CAD files with parametric design software building information modeling methods as a means of transition. A hypothetical building project will be designed and documented to illustrate all aspects of Autodesk Revit software.

Arch Capstone **10614142** **4 Credits**
This advanced course offers architectural students the opportunity to incorporate content from the first three semesters while focusing on personal interests within the field of architecture. Students will begin projects as preliminary building program proposals, further refine them through the design phase, and then develop them into construction documents which could include outline specifications, material estimates and working drawings.

Arch Draft Comm **10614132** **4 Credits**
This course challenges the intermediate architectural student to cultivate critical thinking skills in order to solve design problems associated with commercial architecture. Procedures to prepare construction documents for projects that meet current code and accessibility requirements will be highlighted. Students will capitalize on skills acquired in previous courses to develop architectural plans, elevations, sections, schedules and details.

Arch Draft Res **10614122** **4 Credits**
This course combines architectural student's understanding of drafting principles with advanced design development concepts. Architectural styles, the importance of design components related to the building site and structure, as well as code requirements will be emphasized. Students will collaborate on conceptual designs of a single family residence and prepare a set of architectural working drawings using architectural design software.

Arch Practice **10614143** **1 Credits**
This course is designed to familiarize graduating Architectural Technology students with office procedures and to promote continuing professional development in preparation for entering the workforce. Students will arrange for guest speakers, participate in job shadowing and office tours along with attending planning meetings and continuing education seminars.

Arch. Studio 1 - 3D Modeling **10614107** **3 Credits**
The course will provide students with experience creating building models using 3D surface modeling software. Students will learn how to create and manipulate architectural elements such as walls, windows, doors, and roofs, and how to apply textures and materials to these elements to create realistic and visually appealing models. Throughout the course, students will be encouraged to develop their creativity and problem-solving skills by exploring different design scenarios and solutions. Students will learn how to field-measure existing buildings and generate to-scale plans, sections, and elevations from the 3D models created.

Arch. Studio 2 - CAD Software **10614117** **3 Credits**
Throughout the course, students will be exposed to CAD software commonly used in architecture. The course will cover the basic functions and tools of CAD software. The course begins with simple drafting exercises and progresses to techniques for working with existing architectural CAD files in the context of an adaptive re-use project. The course culminates with the use of CAD software in building design projects.

Arch. Studio 3 - BIM Residential 1 **10614127** **3 Credits**
This course introduces students to Building Information Modeling (BIM) software, with a focus on its applications in residential design. Students will be introduced to BIM software tools and techniques for creating digital models of residential buildings and the creation of construction drawings from the digital model.

Arch. Studio 4 - BIM Residential 2 **10614137** **3 Credits**
The course will use BIM software in the design, documentation, and construction of residential buildings. Students will also use BIM software to produce construction documents. In the context of a real-world house design scenario, students will apply their knowledge of BIM software to residential design. Students will research code requirements and create a house design. Students will create architectural and structural construction documents. Students will present their designs using 3D modeling, visualization, and renderings.

Arch. Studio 5 - BIM Commercial 1 **10614147** **3 Credits**
This course is designed to introduce students to Building Information Modeling (BIM) software's application in commercial building design. Students will use BIM software tools for creating digital models of commercial buildings and the creation of architectural and structural construction drawings from the digital model. Applicable building codes and other industry standards and references will be utilized. Students will learn about commercial structural grids, columns and beams, and foundation and floor/wall systems. They will also learn how to create commercial building items including elevators and other vertical circulation; and how commercial buildings are annotated and detailed.

Arch. Studio 6 - BIM Commercial 2 **10614157** **3 Credits**
Building on Architectural Studio 5, this course will broaden the student's ability to use Building Information Modeling (BIM) software and its application in commercial building design. Students will be taught techniques for the BIM modeling of plumbing, HVAC, and electrical systems. They will also learn site modelling. The students will create construction documents and will present their projects using 3D modeling, visualization, and renderings.

Arch. Studio 7 - Capstone Preparation **10614167** **2 Credits**
The course will guide students in the preparation of the knowledge and resources to develop a successful Capstone project in a studio setting. Students will begin with project, client, and site selection. Then students will proceed with site and code analysis. Students will determine what aspects of sustainability they would like to incorporate in the project. Finally, a building program document will be created which will guide Capstone project design.

Arch. Studio 8 - Capstone Design **10614177** **3 Credits**
Students will apply the knowledge and skills they have acquired throughout their academic journey to a real-world design problem. This course will provide students with a comprehensive and immersive studio setting to create their capstone project. The course will be structured as a studio, where students will work under the guidance of the instructor, who will provide feedback and support throughout the process. Students will develop building designs, estimate project cost, then develop construction documents. They will also learn how to produce high-quality design documents and presentation materials, which will be included in the final capstone presentation.

Archi Detailing **10614133** **3 Credits**
This course guides intermediate architectural students in the process of creating architectural detail drawings. Students will use sketching and CAD software to layout 2D and 3D details. Industry references will be used to properly identify elements, standards and sustainability parameter. Details will be properly called out and placed on construction documents in a clear and understandable manner.

ArchiCAD **10614106** **3 Credits**
Introduction of Architectural CAD commands and drafting techniques used to produce architectural drawings. Drawings are created using basic through advanced commands, settings, editing, dimensioning and plotting methods. Techniques include the creation of the building information model, families usage and sheet layouts.

Architectural History, Theory & Drawing **10614103** **2 Credits**
This course introduces students to architectural history and its impact on design. Instruction centers on influential styles, buildings, and architects throughout history. The course covers architectural theory, examining the key ideas and concepts. Students will analyze the ways architectural theory have been applied in the design of buildings. Students will develop the skills necessary to create hand drawn architectural drawings and sketches. Students will learn the principles of orthographic and perspective drawing and sketching and will practice creating drawings and sketches as a tool for understanding, documenting, and designing buildings.

Architectural Practice & Portfolio **10614180** **1 Credits**
This course is designed to give students the opportunity to refine their resume and portfolio. They will also develop skills in graphic design, presentation, and communication to effectively showcase their work and skills to potential employers. Interviewing and job search strategies will also be covered. Students will be familiarized with office procedures in preparation for entering the workforce. The course begins exploring the various roles and responsibilities of design team members in an office setting, including project management, client relations, and team collaboration.

Architectural Presentation Techniques **10614170** **1 Credits**
The course will focus on developing the students' ability to communicate architectural concepts effectively through a range of visual and oral techniques. Throughout the course, students will learn how to create effective presentations that effectively convey their design ideas to clients, stakeholders, and other members of the architectural community. This will include an overview of the different types of architectural presentations, including 2D and 3D drawings, models, renderings, and animations.

Art History: Prehistory to Medieval **20815200** **3 Credits**
Surveys the development of Prehistory, Ancient through Medieval art and architecture found throughout Europe, the near East and Egypt. Emphasis is given to the form and meaning of a select group of artworks and buildings, their stylistic tendencies and respective movements in the history of art, and the socio-political and cultural contexts for these movements.

Art History: Renaissance to Modern **20815210** **3 Credits**
Survey of the development of European and American art and architecture from the time of the early Renaissance in Italy through the first quarter of the 20th century. Emphasis is given to the form and meaning of a select group of artworks and buildings, their stylistic tendencies and respective movements in the history of art and the socio-political and cultural contexts for these movements.

Audio Productions **10206124** **3 Credits**
This course acquaints the student with the tools and techniques of audio production; sound pickup, microphone choice, amplification, recording, syncing sound with picture, editing, distribution, and output as they apply to live audio, overdubbing, and audio for audio-visual presentations. Students will also evaluate quality level of voice recordings, music, and ambience, while they are introduced to key frame editing and the exporting of media using a variety of codecs. The practice of utilizing selection criteria for potential purchase of audio components will be covered.

Auto College Success & Study **32404308** **1 Credits**
This course provides learners with strategies to develop skills for success in college. Learners will apply self-management techniques, explore resource management strategies, practice study skills and learn about ways to improve personal effectiveness.

Auto Occup & Bus Operations **10404195** **3 Credits**
A comprehensive course in automotive business practices and regulatory requirements. Business operations including career opportunities in the automotive industry, business varieties, and employee-employer interaction and customer service. Compliance and regulations including the regulatory compliance issues required by the EPA, DOT, OSHA, DNR, Ag Dept., Trade & Consumer Protection and others.

AutoCAD **10606163** **2 Credits**
Students are introduced to the concepts, commands and techniques used to create two-dimensional drawings using current AutoCAD software. Topics covered are draw and modify commands, display and inquiry commands, layering, annotating, dimensioning, and symbol creation methods. Paper/model space, view ports and layouts are used for plotting.

Automated Systems Troubleshooting **10664109** **2 Credits**
A systems-based troubleshooting course reflecting industry standards and methodologies. The course addresses procedures, tools, instruments, and equipment necessary to analyze and repair modern automated industrial equipment.

Automatic Transmissions **32404355** **3 Credits**
A practical approach to automatic transmission theory and service. Provides functional skills on individual transmission and transaxle units. Diagnosis, repair, programming and adjustments are emphasized.

Automation Systems Integration **10620164** **2 Credits**
This course covers the coordination and application of automation technologies into an integrated and automated manufacturing system. These technologies include PLCs, Drives, HMIs, and analog/digital modules and field devices.

Automotive Brake Systems **32404326** **3 Credits**
All aspects of safety are stressed as the course progresses through theory, construction, nomenclature and acceptable servicing procedures. A practical degree of proficiency is obtained in diagnosing, servicing and testing the complete automotive braking system and its related electrical and electronic components.

Automotive Climate Control **32404382** **3 Credits**
Provides principles and test procedures to diagnose automotive heating, ventilating and air conditioning system concerns. Includes testing and repairing to current federal and state environmental standards.

Automotive Internship **32404369** **3 Credits**
Student will be responsible to apply employment skills to obtain an internship in an automotive repair facility in the greater La Crosse area. The student can work in multiple areas of the business including parts, service reception and service repair department. This position must be approved by your program student advisor.

Automotive Trade Simulation **32404366** **3 Credits**
Lab experiences enhance diagnosis and repair skills amd simulate the automotive service and repair industry.

BA Planning & Monitoring **10102222** **3 Credits**
Learn various approaches and techniques used to carry out business analysis. Focus on stakeholder engagement, governance, information management, and performance improvement tasks.

BAS Apprenticeship Completion **10499100** **39 Credits**
The successful completion of an apprentice related instruction and possession of a Certificate of Apprenticeship (completion) issued by the DWD-BAS as fulfilling the 39-credit minimum Technical Studies requirement of the 60 credit Technical Studies- Journey Worker Associate of Applied Science degree. A WTCS apprenticeship program with at least 400-hours of paid related instruction (PRI) meets this threshold. Advanced standing for apprentice related instruction taken at other accredited institutions is currently determined on an individual basis using established Credit for Prior Learning procedures.

BSEM Capstone Prep **10481121** **2 Credits**
This course will serve as preparation for the BSEM Capstone Project course. Students will complete the preliminary work for their capstone project. Additionally, they will complete career readiness tasks such as resume writing, interview prep, and career search.

BSEM Capstone Project **10481122** **2 Credits**
This will be a cumulative application of the concepts of all technical skills and general knowledge obtained throughout the curriculum to a sponsored project. These projects will be either industry, community or municipality sponsored and will range from industrial, commercial or residential in nature. Students will perform complete design, analysis, specification, and commissioning of a variety of energy management systems, thermal systems, or other renewable and energy efficiency systems. A final project report will be presented to the sponsor, community forum and the advisory board.

BSEM Work-Based Experience **10481116** **1 Credits**
This course is designed to provide students with a valuable opportunity to apply and further enhance their knowledge and skills through hands-on, real-world experiences. Students will engage in work-based learning placements with industry partners, gaining practical insights, refining their abilities, and developing a deeper understanding of the challenges and dynamics of the field.

Bakery Production I **10314102** **5 Credits**
Bakery Production 1 enables students to acquire the skills and knowledge necessary to product a wide range of bakery products. Students will be introduced to the fundamentals of baking principles through hands-on production of bakery goods. Safe use of bakery equipment as well as proper sanitation procedures will be emphasized.

Bakery Production II **10314103** **4 Credits**

Baking Fundamentals I **10303110** **4 Credits**
This course is a study of the fundamentals of baking techniques and chemical reactions inherent in the baking process. Students will mix, shape, and bake basic bakery items, including yeast dough, quick breads, cakes, cookies, and short doughs. Topics include baking terminology, tool and equipment use and care, functions of ingredients, the use of proper flours, and the evaluation of baked products.

Banking Principles **10114124** **3 Credits**
This is a core course focusing on the banking industry, including financial markets, financial institutions, the Federal Reserve, international finance, laws/regulations, and monetary policy. Learning activities include a bank budget, ratio analysis, and interest rate projects.

Basic Electrical Systems **32404304** **3 Credits**
Diagnose, test, repair and replace basic automotive electrical system components. Includes an introduction to tools and equipment, automobile and shop safety and safety sheets are signed. Adequate shop time is provided for practical applications.

Basic Engineering Design **10623261** **2 Credits**
This project-based course introduces engineering students to engineering problem solving, group project design, budgeting, Failure Modes and Effects Analysis, project scheduling and Gantt charts, engineering design reviews, and fabrication using 3D printing. Students will be required to work in teams to propose, develop and execute a professional quality engineering design project using the aforementioned skills, including conducting a design review for an audience of outside engineering experts.

Basic Hematology **10513120** **3 Credits**
This course covers the theory and principles of blood cell production and function, and introduces the student to basic practices and procedures in the hematology laboratory.

Basic Immunology Concepts **10513115** **2 Credits**
This course provides an overview of the immune system including laboratory testing methods for diagnosis of immune system disorders, viral and bacterial infections.

Basic Industrial Controls **10620135** **2 Credits**
A variety of industrial control components and systems are explored. Emphasis is placed on relay control components and ladder logic applications along with three phase motors and motor starting. Photo electric and proximity sensors are introduced. Electronic overload protection and soft motor starting are explored. Adjustable Frequency AC motor drives are covered. Actual industrial equipment and manuals are used by students in the development and testing of practical circuits and systems. Students will interpret and create wiring diagrams.

Basic Lab Skills **10513110** **1 Credits**
This course explores health career options and the fundamental principles and procedures performed in the clinical laboratory. You will utilize medical terminology and basic laboratory equipment. You will follow required safety and infection control procedures and perform simple laboratory tests.

Basic Maintenance **32404313** **3 Credits**
Covers the diagnosis, maintenance and repair of the heating and cooling systems, tires and wheel balancing, vehicle safety, service and shop management and parts distribution. Automotive shop safety practices are also stressed.

Basic PLC Programming with Digital **10620153** **2 Credits**
This course introduces the concepts of digital logic and PLC Ladder Logic Programming. Digital number systems and basic logic gates are covered. Emphasis is placed on providing a foundation for the application of PLC Programming. PLC Ladder Logic programming will also be addressed using simulation software. Basic programming instructions will include bit instructions, timers/counters, and other word based instructions.

Basic Robotic Programming **10664100** **2 Credits**
In this course, learners are introduced to programming techniques for the Yaskawa DX200 robots. The learner examines teach pendant programming including I/O, routines, decision making, multiple axis of positional operation, and robot communication. Upon completion of the course, learners will be able to operate and program the Yaskawa DX200.

Basic Soldering **10660106** **1 Credits**
This course emphasizes beginning soldering techniques for students in multiple electronics programs. The course will cover basic soldering and desoldering of wires and components.

Basic Statistics **20804240** **4 Credits**
This course explores the collection, presentation, analysis, and interpretation of experimental results. The focus is on understanding statistical inference (confidence intervals and hypothesis testing). Emphasizes the inherent uncertainty when decisions are made based on sample data. Includes descriptive statistics, basic probability theory, sampling distributions, and the Central Limit Theorem; the binomial, normal, Student t, and chi-square distributions; 1- and 2-sample tests, linear regression, correlation, multiple samples, and selected nonparametric procedures.

Basic Study of Metals **31442330** **1 Credits**
A course of instruction on the basic physical, mechanical, and chemical properties of metals and the practical applications to welding.

Big Data **10631120** **2 Credits**
Students will embark on a foundational exploration of Big Data, tracing its evolution and understanding the fundamental characteristics that make it unique. The course provides an overview of the intricate architecture of Big data and introduces common and widely used distributed computing frameworks. Through hands-on activities, participants will develop practical skills in data storage, management, processing, and analytics, with an understanding of the challenges related to scalability and performance optimization in large-scale environments.

BioMed Codes/Stand/Procedures **10605209** **3 Credits**
This course is a study of the major requirements and procedures a HTM (Healthcare Technology Management) professional follows while supporting and maintaining medical equipment. It includes investigating relevant codes, guidelines, regulations, applicable agencies, and the clinical environment. Biomedical procedures are studied and implemented, including performing equipment maintenance procedures PM (Preventative Maintenance) and some minor repairs if available. Activities & tours are carried out at local clinical facilities (when available) and training facilities.

BioMed Science Applications **10605174** **3 Credits**
This course focuses on core biomedical skills, background information, and critical thinking through the Biomedical applications of various sciences. A basic introduction to the concepts/applications of the following topics is included: math tools, optics, magnetism, wave/particle theory, atomic and radiation physics, general chemistry, molecular interactions, reactions, bonding, hydraulics, pneumatics and robotics.

BioMedical Networking Applications **10605205** **2 Credits**
A course studying the operation and maintenance of medical equipment networked information systems of a modern hospital within the HTM (Healthcare Technology Management) arena. The major topics covered are: medical networking applications, HL7, PACS, DICOM, HIS, RIS, EMR, command prompt skills, networking, telemetry, RFDI, virtualization, remote access, Linux, security topics, and medical network troubleshooting.

Biomed Science Apps - Part 1 **10605211** **2 Credits**
This course is the first of two that focuses on core biomedical skills, background information, and critical thinking through the Biomedical applications of various sciences. A basic introduction to the concepts/applications of the following topics is included: math tools, work/energy/power, heat/temperature, solids and fluids, hydraulics, pneumatics, and motors.

Biomed Science Apps - Part 2 **10605215** **2 Credits**
This course is the second of two that focuses on core biomedical skills, background information, and critical thinking through the Biomedical applications of various sciences. A basic introduction to the concepts/applications of the following topics is included: harmonic motion/waves, electromagnetism, quantum physics, atomic physics/physical phenomena, nuclear physics, optics, hydraulics and general chemistry topics.

Bldg Estimating **10614149** **3 Credits**
This course leads advanced architectural students through the estimating process to provide a framework that can be applied to various trades on different types of construction projects. Students will learn how the science of mathematics, the knowledge of building materials, and the art of interpretation of blueprints combine. Construction plans will be referenced to complete material quantity surveys that will be converted into monetary values.

Bldg Systems **10614148** **3 Credits**
This course familiarizes advanced architectural students with basic design procedures, system characteristics and flexibilities of mechanical and electrical systems in construction. A working-level knowledge of the principles and practices related to building electrical, plumbing, HVAC, fire protection, and telecommunications systems will be presented. Students will make connections through practical exercises and real world design problems.

Blood Bank **10513109** **4 Credits**
Focuses on blood banking concepts and procedures including blood typing, compatibility testing, work ups for adverse reaction to transfusions, disease states and donor activities.

Blueprint Reading **10420204** **1 Credits**
Requires the learner to interpret prints and industrial drawings relative to manufacturing processes. Students are encouraged to take this course concurrently with Fundamentals of Machining and Measurement and Inspection.

Blueprint Reading 1 **31410319** **1 Credits**
This course introduces the student to the symbols, notations, and abbreviations that make up the architectural alphabet or language of blueprint reading. The student will be acquainted with the basic concepts upon which all construction drawings are read and interpreted, and apply them throughout the course.

Blueprint Reading for Welding **31457305** **1 Credits**
This course is designed to develop the student's skill in reading working drawings of weldments.

Body Structure and Function **10806120** **3 Credits**
This course is designed to provide the students with a basic study of the structure and function of the human body.

Building Automation Systems **10601131** **3 Credits**
This course provides students with an in-depth understanding of building automation systems (BAS) as they relate to HVAC design and operation. Students will learn about the different components and functions of BAS, including sensors, actuators, controllers, and communication protocols. Students will also study the principles of programming and networking as they relate to BAS in HVAC. They will learn how to program and troubleshoot BAS using industry-standard software and protocols, as well as how to integrate BAS with other building systems.

Building Construction for Fire Protect **10503143** **3 Credits**
Provides the components of building construction that relate to fire and life safety.

Building Estimating **10614154** **2 Credits**
The course covers a range of topics related to building estimating, including measurement and quantification of materials, labor and equipment required for a given project. Mathematical concepts use in calculating area and volume quantities will be reviewed. Students will use spreadsheet software in building estimating. Students will learn how to develop and analyze cost estimates for a variety of building types and sizes, including residential and commercial construction projects.

Building Materials **10614114** **2 Credits**
This course is designed to provide students with an understanding of building materials and their role in architectural design and construction. Students will explore the properties, characteristics, and applications of various building materials, including wood, steel, concrete, masonry, and glass. The course will also examine the environmental impact of different materials and strategies for sustainable building practices.

Building Science **10614300** **1 Credits**
Students will study the concepts associate with building science principles including durability, structural integrity, thermal performance, moisture management, air tightness and on-site renewable energy systems.

Building Science and Materials **10614115** **3 Credits**
Students will study the concepts associated with the theory, materials, and methods used in construction to include footings and foundations, walls, floors, roofs and roof materials, exterior finishes, interior walls, ceiling and floor finishes, insulation types, vapor and air infiltration, sound protection and building codes. Additionally, student will become familiar with blueprint reading and examine all the trades associated with construction including: electrical, HVAC, and plumbing.

Building Systems **10614160** **2 Credits**
This course focuses on the various systems that work together to create a building, such as structural, mechanical, electrical, plumbing, and fire protection systems. The students will gain an understanding of the principles, design, and construction techniques related to these systems.

Business Analyst Capstone **10102220** **4 Credits**
This course provides Business Analyst students the opportunity to integrate the knowledge they have obtained throughout their curriculum by demonstrating their proficiency of Business Analyst skills throughout a project.

Business Analyst Professionalism **10102210** **3 Credits**
Students will learn a wide-range of strategies to enhance their professional success as a Business Analyst; including ethical behavior, professional communication, time management, stress management, work place relationships, accountability, team building, problem solving, and leadership. The competencies of this course build the foundation for the remainder of the core program courses.

Business Applications for AI **10156106** **2 Credits**
Trace the historical development of AI and explore various case studies. Leverage AI tools and platforms to provide greater efficiency and deeper insights when developing data-driven solutions. Examine implications for AI usage on data governance.

Business Communication Skills **10106119** **3 Credits**
This course emphasizes the principles and correct application of grammar, style, usage, and punctuation through reinforcement exercises ranging from basic to advanced levels. Introductory writing concepts required to prepare basic business letters and memos are briefly presented. Students apply basic proofreading, editing, and formatting skills to revise a variety of business documents commonly encountered in the work setting.

Business Concepts **10102169** **2 Credits**
Students will study the interrelationships among the various functional areas of a business and perform career exploration in these roles.

Business Correspondence for Healthcare **10106123** **3 Credits**
Students will learn to write effective business letters, reports and other correspondence. In addition, students will learn how to properly use an office reference manual to reinforce skills needed to proofread and edit documents within an office or clinical setting. This course contains a strong writing emphasis.

Business Financials **10102126** **3 Credits**
Students will explore how businesses build their bottom line. In the pursuit of profitability, students will learn to maximize the financial resources of the organization. This will be accomplished by evaluating financial statements, budgets, sales forecast, and other financial metrics.

Business Formatting **10106112** **3 Credits**
Focuses on appropriate formatting of business documents including letters, memorandums, reports, and tables. Students will use templates and work with forms and columns. Emphasis will also be placed on keyboarding speed.

Business Formatting for Healthcare **10106184** **2 Credits**
Students will focus on learning appropriate formatting of business documents including business letters, memorandums, agendas, meeting minutes, reports and tables.¬† Students will use templates and work with forms and columns.

Business Information Systems **10154125** **3 Credits**
Advanced features of MS Office Excel and Word, an introduction to Computer Security, and other application software.

Business Law **10102130** **3 Credits**
This course emphasizes the role of law in today's business environment. Students will be introduced to the sources of law, consumer protection, contracts, real and personal property law, landlord and tenant agreements, agency and employment agreements, and forms of business ownership.

Business Management Capstone **10102133** **3 Credits**
Students apply their business management knowledge to develop a portfolio that demonstrates their competence in key areas of business management, including financial analysis, human resource management, supervision, marketing, planning and budgeting, computer applications, project management, international business, and operations management. Emphasis is placed on demonstrating business management knowledge through planning and professional writing. Local business professionals review the portfolio and evaluate each student's expertise.

Business Procedures **10106151** **3 Credits**
Students will learn about a variety of workplace skills including human resource issues, telecommunications, handling and processing mail, creating meeting communications, file management, ergonomics, and equipment use.

Business Professionalism **10102137** **3 Credits**
Students will learn strategies for adjusting to college and improving classroom performance, as well as for their career. These skills include self-assessment, time management, study skills, learning styles, active reading, communication skills and career development. The course also includes an introduction to the program course competencies and the requirements for each. Students will review course sequencing and the importance of this to their timely graduation. An in-depth use of Blackboard, student e-mail, and other technology will be introduced.

CJ Community Corrections **10504869** **3 Credits**
This course provides an examination of the theory and practice of community-based correctional programming. It explores working with offenders from supervision, surveillance, control, and competency development within their community.

CJ Correctional Internship **10504861** **2 Credits**
This course will provide the student with a field course which integrates principles of criminal justice with practical correctional experience in an agency. Supervision will be conducted by an instructor and agency representative.

CJ Investigative Strategies **10504858** **3 Credits**
This course provides an analysis of the principles of evidence recognition, preservation, and scene processing. It examines at-scene techniques and strategies and follow-up investigation along with the basics of interviewing/interrogation and pre-trial identification procedures.

CJ Justice Services Internship **10504862** **2 Credits**
This course will provide the student with a field course which integrates principles of criminal justice with practical justice services experience in an agency. Supervision will be conducted by an instructor and agency representative.

CJ Law Enforcement Internship **10504860** **2 Credits**
This course will provide the student with a field course which integrates principles of criminal justice with practical law enforcement experience in an agency. Supervision will be conducted by an instructor and agency representative.

CJ Principles of Security **10504868** **3 Credits**
This course provides an overview of the history of private security, crime prevention, and asset protection within private security operations. It explores the concepts of security techniques and strategies.

CJ Research Methods **10504859** **3 Credits**
This course provides an analysis of various research (quantitative and qualitative) methodologies along with the strengths and limitations of CJ research.

CJ Technology **10504867** **2 Credits**
This course examines technology in CJ from communication and information technology systems to surveillance and imaging, and forensic analysis.

CNC Production Operator **10444212** **1 Credits**
Requires the learner to operate a CNC (Computer Numerical Control) turning and machining center including the calling up of programs, loading and unloading parts, inspecting, and recognizing tool wear.

CPT Coding **10530184** **3 Credits**
Prepares learners to assign CPT codes, supported by medical documentation, with entry level proficiency. Learners apply CPT instructional notations, conventions, rules, and official coding guidelines when assigning CPT codes to case studies and actual medical record documentation.

Calculus & Analytic Geometry 1 **20804231** **5 Credits**
Designed for students of mathematics, science, and engineering. An introduction to the basic properties of limits, rate of change of functions, continuity, derivatives of algebraic and elementary transcendental functions, their products quotients and compositions, curve sketching, finding maxima and minima, and indefinite and definite integration with applications.

Calculus & Analytic Geometry 2 **20804232** **5 Credits**
This course is designed for students of mathematics, science, and engineering. Topics covered include the techniques of integration, numerical approximation of definite integrals, applications of integration and an introduction to first order differential equations, analysis of infinite sequences and series, parametric equations and derivatives of parametric curves, polar coordinates in the plane and integrals using polar coordinates, the analytic geometry of the conic sections, an introduction to vectors in two and three dimensions, scalar and vector cross products, graphs of quadric surfaces.

Calculus 3 **20804233** **5 Credits**
Calculus 3 is designed for students of mathematics, science, and engineering. Topics include differentiation of vectors, space curves and curvature, functions of more than one variable, level curves, level surfaces, limits, continuity, partial derivatives, total differential, tangent planes, the gradient operator, directional derivatives, multivariable chain rule, locating extrema, and saddle points, Lagrange multipliers, multiple integrals in rectangular, polar, cylindrical and spherical coordinates, transformations of multiple integrals, the Jacobian, surface area, applications of multiple integrals to geometry and mechanics, line integrals, and an introduction to vector fields.

Capstone **10531934** **2 Credits**
This course provides the student with a final opportunity to incorporate their cognitive, psychomotor, and affective skills through labs and scenario-based practice and evaluations prior to taking the National Registry examinations. Technical skills attainment (TSA) for each student will be compiled and/or documented within this course as required by the DHS-approved paramedic curriculum. Students will also participate in a field capstone internship as identified by CoAEMSP accreditation in which the student must be provided with an opportunity to serve as team leader in a variety of pre-hospital advanced life support emergency medical situations.

Capstone Accounting Project **10101162** **3 Credits**
This project-based course is a culmination of the knowledge and skills from financial, cost, payroll accounting, case analysis, information systems, and accounting spreadsheets. The course project entails a manufacturing business, including the production and sales of durable goods. The project will include the development of organizational policies and procedures and, accounting information system with controls; establishing performance criteria and inventory; creating the master budget; maintaining a manual information system; performing financial reporting and analysis; presenting the results of business operations, and completing peer evaluations.

Capstone Design Studio **10304150** **4 Credits**
An exploration of advanced, student-selected interior design project(s) that convey knowledge and understanding of professional design practice. Building upon knowledge and experience earned throughout the interior design program to date, students will be critiqued on their ability to communicate their solutions as well as the quality of their work by real design professionals across the state of Wisconsin.

Capstone in Leadership **10196167** **3 Credits**
This course will be a capstone course on leadership. Students will examine their leadership potential and growth with the use of leadership evaluations and feedback.

Career Development **20890202** **1 Credits**
Provides an opportunity for students to participate in personal career development in order to promote individual growth, academic achievement and career satisfaction. It is recommended for all students as a means to clarify or validate their current and/or future career aspirations. Topics covered include a foundation of career development theory, assessment of self, understanding of the world of work, developing life/work planning skills, which includes decision-making and goal setting. These topics are presented using lectures, self-directed learning, group exercises, class discussions, guest speakers, multimedia, and panel discussions.

Career Development in Agriculture **10006100** **2 Credits**
Student will develop individual leadership and employment qualities, in addition to exploring the agricultural industry and available careers. Subjects to be covered include: personal evaluation, goal setting, career opportunities, career exploration, current issues in agriculture, employment preparation and interviewing skills. Also included are units covering workplace regulations, employment seeking and motivational styles and techniques.

Carpet Care **30519327** **2 Credits**
Prepares students for custodial services employment. Introduces carpet types, carpet care chemicals and equipment. Student will gain knowledge and experience in assessment of current carpet care needs and performance of carpet care maintenance techniques (routine, interim and restorative).

Case Analysis & Reporting **10101132** **3 Credits**
The objectives of the case method course are to provide training in systematic and analytical thinking, creative problem solving, and decision-making. Although there are a number of ways to approach a case problem, the key focus should be employing a structured system in accomplishing the object and answering relevant questions. Reporting will include written and oral reports.

Central Service Clin Practices **30534303** **2 Credits**
The learner will apply central service fundamentals and theories in the clinical and in the hospital setting. Experience will include time in the operating room.

Central Service Fundamentals **30534302** **3 Credits**
In the lecture and lab setting, the student will learn the practices and theories related to disinfection, decontamination, packaging, sterilization, biological monitoring, identification, handling and assembly of instruments, equipment and supplies. Storage, inventory, distribution and record keeping will be introduced.

Chassis Electrical & Elect Sys **32404358** **3 Credits**
Diagnose, test, repair and replace chassis electrical and electronic system circuits and components. Systems covered include supplemental restraint (SRS), wiper/washer, steering columns, power accessories (windows, locks, seats, mirrors, sun roofs) and instrumentation.

Children and Family Studies **10520112** **3 Credits**
Students explore the human service professional's role when working with youth and families. Issues impacting the family system will be explored including trauma and other adverse childhood experiences. Students will examine models of practice and strategies for working within these systems.

Children, Families and Groups **10520190** **3 Credits**
Students explore the human service professional's role when working with children, families and groups. Issues impacting the family system will be explored including child abuse, divorce, mental health, juvenile delinquency, bereavement and physical health problems. Students will examine models of practice and strategies for working with youth, families and adults individually and in group settings. Students learn principles and techniques needed to lead informational and supportive groups. Students practice group work skills during class.

Cisco 1: Networking Fund **10150110** **3 Credits**
This course introduces the student to computer network fundamentals, including network terminology and protocols, network standards, the OSI model, IP addressing, cabling, networking components, and basic LAN design. The course is delivered using a combination of lectures, lab projects, and the Internet. PLEASE NOTE: A Windows operating system is recommended for this course. Required software used in this course is not compatible with Mac operating system.

Cisco 2: Switching & Routing Technology **10150120** **3 Credits**
The emphasis in this course is on routing theory and router technologies. The student will examine router elements, identify the functions of the TCP/IP transport-layer protocols, configure IP addresses, monitor and verify selected access list operations, and more. The course is delivered using a combination of lectures, lab projects, and the Internet. PLEASE NOTE: A Windows operating system is recommended for this course. Required software used in this course is not compatible with Mac operating system.

Civil Litigation 1 **10110102** **3 Credits**
Outlines the initial stages of civil litigation including initial client contact, investigation, pleadings, and motions.

Civil Litigation 2 **10110103** **3 Credits**
This course provides a continuation of civil litigation procedure to include discovery, trial, and appellate procedure.

Cleaning Fundamentals **30519325** **3 Credits**
Prepares students for custodial services employment. Develops knowledge and experience in general cleaning techniques, chemical usage, tools and equipment usage and identification of maintenance issues encountered by custodial staff. Includes common area, office/classroom, general kitchen, and restroom cleaning.

Clinical Chemistry **10513116** **4 Credits**
Introduces clinical chemistry techniques and procedures for routine analysis using photometric, potentiometric and separation techniques. Topics in this course include pathophysiology and methodologies for carbohydrate, lipids, proteins, renal function and blood gas analysis. Additional topics include hepatic, cardiac markers, tumor markers, endocrine function, miscellaneous body fluids, toxicology, enzymes and electrolytes.

Clinical Experience 1 **10513151** **3 Credits**
In this clinical, students will practice the principles and procedures of laboratory medicine as an entry level Medical Laboratory Technician in a clinical laboratory setting. Students will learn to operate state of the art instruments and report results on Laboratory Information Systems.

Clinical Experience 2 **10513152** **4 Credits**
Provides continuing practice for the principles and procedures of laboratory medicine as an entry level Medical Laboratory Technician in a clinical laboratory setting. Students will learn to operate state of the art instruments and report results on Laboratory Information Systems.

Clinical Experience III **10513159** **2 Credits**
Provides continuing practice for the principles and procedures of laboratory medicine as an entry-level Medical Laboratory Technician in a clinical laboratory setting. Students will learn to operate state of the art instruments and report results on Laboratory Information Systems.

Clinical Microbiology **10513133** **4 Credits**
This course presents the clinical importance of infectious diseases with emphasis upon the appropriate collection, handling and identification of clinically relevant bacteria. Disease states, modes of transmission and methods of prevention and control, including antibiotic susceptibility testing, will also be discussed.

Clinical/Field Experience **10531933** **3 Credits**
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of instructors or approved preceptors. Successful completion of this course requires the student to meet all clinical/field requirements leading up to the paramedic field capstone phase of education.

Coagulation **10513121** **1 Credits**
This course introduces the theory and principles of coagulation and explores mechanisms involved in coagulation disorders. Emphasis is placed upon laboratory techniques used to diagnose disease and monitor treatment.

College Algebra **20804212** **4 Credits**
Includes fundamental topics covered in Intermediate Algebra with a more careful look at the mathematical details and a greater emphasis on the concept of function. Covers quadratic, polynomial, rational, exponential and logarithmic functions, equations and inequalities; the use of matrices and determinants in solving linear systems of equations, solving non-linear systems; sequences and series.

College Chemistry 1 **20806209** **5 Credits**
General college chemistry which includes the topics of measurement, chemical nomenclature, chemical reactions and stoichiometry, atomic structure, gas laws, thermochemistry, chemical bonding and solution chemistry. The course is for students who need the first one of two semesters of what is typically considered freshman university level chemistry for science majors and university transfer students. Laboratory work assists in understanding chemical concepts and developing problem-solving skills.

College Chemistry 2 **20806212** **5 Credits**
College Chemistry 2 is a continuation of 20-806-209. This course covers the principles and applications of organic chemistry, reaction kinetics, equilibrium, thermodynamics, electrochemistry, coordination compounds, nuclear chemistry and environmental chemistry. Lab activities explore traditional analytical chemistry techniques, making extensive use of computer-assisted data analysis. This course involves rigorous quantitative problem solving, and a solid mathematics background is recommended.

College Mathematics **10804107** **3 Credits**
algebra, geometry, trigonometry, measurement and data. Algebra topics emphasize simplifying algebraic expressions, solving linear equations and inequalities with one variable, solving proportions and percent applications. Geometry and trigonometry topics include; finding areas and volumes of geometric figures, applying similar and congruent triangles, applying Pythagorean Theorem, and solving right triangles using trigonometric ratios. Measurement topics emphasize the application of measurement concepts and conversion techniques within and between U.S. customary and metric system to solve problems. Data topics emphasize data organization and summarization skills, including: frequency distributions, central tendency, relative position and measures of dispersion. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections, and using calculators.

College Physics 1 **20806221** **5 Credits**
College Physics 1 is the first semester of a one-year, college-parallel, algebra- and trigonometry-based introductory physics course. Students develop a conceptual understanding of the basics of physics and are provided with practical hands-on lab experience which helps to broaden the understanding of physics. This course covers the basic properties of motion, force, energy, momentum, rotation, fluids, and heat. Thermodynamics, simple harmonic motion, waves, and sound are also covered as time allows. It stresses developing good problem-solving strategies.

College Success Skills **10890102** **1 Credits**
This course will focus on strengthening student skills on time management, note-taking, test preparation/test taking strategies, critical thinking, and other skills for promoting college success.

College Technical Math 1A **10804113** **3 Credits**
Topics include: solving linear equations; graphing; percent; proportions; measurement systems; computational geometry; and right triangle trigonometry. Emphasis will be on the application of skills to technical problems. Successful completion of College Technical Mathematics 1A and College Technical Mathematics 1B is the equivalent of College Technical Mathematics 1.

College Technical Math 1B **10804114** **2 Credits**
This course is a continuation of College Technical Mathematics 1A. Topics include: performing operations on polynomials; solving quadratic and rational equations; formula rearrangement; solving systems of equations; and oblique triangle trigonometry. Emphasis will be on the application of skills to technical problems. Successful completion of College Technical Mathematics 1A and College Technical Mathematics 1B is the equivalent of College Technical Mathematics 1.

College Technical Math 2 **10804116** **4 Credits**
Topics include: 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.

Commercial Blueprint Reading **31410339** **1 Credits**
This course is designed to provide print reading experience in heavy commercial construction. Students will study concepts regarding elements commonly found on prints of large structures. Included are types of construction, site work, structural steel construction, reinforced concrete construction and finish construction.

Commercial Cabinetmaking **31409325** **3 Credits**
In this course, students will study the materials and equipment used in the commercial cabinetmaking field to include: high pressure laminates, substrates, adhesives, and hardware. Students will construct various types of commercial casework and countertops in the lab.

Commercial Cabinetry **31409335** **4 Credits**
In this course, students will study the materials and equipment used in the commercial cabinetmaking field, including high pressure laminates, substrates, adhesives, and hardware. Hands-on lab sessions will enable students to construct various types of commercial casework and countertops, utilizing traditional techniques alongside modern technologies such as CNC machines for enhanced precision and efficiency.

Commercial Design Studio **10304134** **4 Credits**
Building on the skills gained in both Residential and Retail Design Studio, students will demonstrate a comprehensive understanding of the processes, techniques, and concepts used by designers to arrive at innovative and successful solutions within a commercial design environment.

Commercial HVACR Systems **10601130** **3 Credits**
This course provides students with an in-depth understanding of commercial HVACR systems, including design, installation, maintenance, and troubleshooting. Students will learn about the unique challenges and requirements of commercial HVACR systems, as well as the latest trends and technologies in this field. Students will also study the principles of air distribution and ventilation in commercial buildings, including duct design, air balancing, and indoor air quality. They will calculate heating and cooling loads, select appropriate HVACR equipment, and design efficient and effective air distribution systems.

Commercial Systems **31410360** **1 Credits**
In this course, students will study the materials and methods used for construction of a metal stud framed wall, hollow metal door frame installation, kick-down door frame installation, hollow metal window frame installation, and acoustical ceiling installation.

Communication Planning and Validation **10102214** **2 Credits**
Students will examine tools utilized to plan communications and support ongoing collaboration and requirements validation. Methods used to communicate, verify, and validate requirements will be explored.

Communications Systems **10662138** **3 Credits**
This course introduces the concepts of AM/FM and digital modulations, demodulation, and transmission techniques. Topics include the frequency domain, noise effects, transmission lines, RF propagation, antennas, sampling types, multiplexing, PCM and network protocols.

Community Corrections **10504854** **1 Credits**
This course provides an examination of the theory and practice of community-based corrections. It explores traditional and contemporary practices of working with offenders from supervision, surveillance, control and competency development.

Community Practice **10514179** **2 Credits**
Explores practice options and interventions for occupation- based community practice. Students articulate the unique role of occupational therapy within the community.

Community Resources and Ser **10520102** **3 Credits**
This course seeks to expose the student to a wide variety of community agencies, resources, and programs through the use of guest speakers and site visits. The functions, funding, clients served, eligibility requirements, and referral procedures of the agency will be emphasized.

Comp Support Spec Capstone **10154132** **3 Credits**
Computer Support Specialist (CSS) majors complete their portfolio which demonstrates their competence in the following key areas: software, hardware, support, training, project management, networking, and staff management. Students will create a cover letter, resume, and participate in several interviews where they will gain interviewing skills while learning how to utilize their portfolio during an interview. Students will use the knowledge gained throughout the CSS program in a student-run help desk environment.

CompTIA Data+ Prep **10156108** **2 Credits**
Prepare to take the Comp TIA Data+ certification exam, a widely recognized professional credential that demonstrates to employers that you have a thorough understanding and knowledge of key concepts and skills used by businesses to make data-driven decisions. This course will review core data concepts, data mining and analysis, visualization, and fundamental aspects of data governance.

Comparative CJ Systems **10504865** **3 Credits**
This course provides an examination of justice systems throughout the world. It compares similarities and differences and provides a societal context for the development of each system with the goal for justice system improvement.

Compensation Management **10116172** **3 Credits**
Elements of pay, equity issues, job evaluation, market-based strategies, and compensation philosophy will be explored. Students learn to apply the principles of compensation management to maintain an organization's competitive advantage while complying with state and federal laws.

Compositing and Video Effects **10206112** **3 Credits**
Students will focus on the common animation and video effect design principles essential for creating engaging, high-quality video content. Students will build on their knowledge of motion graphics and video effects programs and how to apply video effects to their projects. They will also learn how to create complex compositions using advanced techniques, such as chroma keying, 3D integration, and exploring plug-ins.

Comprehensive Graphic Design **10201156** **3 Credits**
This advanced course incorporates content from the first three semesters and offers designers the opportunity to deal with hardware and software issues while practicing more advanced design, illustration, and typography skills. Projects will be developed from concept stage through preflight operations. Additionally, students will troubleshoot problems that occur during electronic file preparation and pre-press stages.

Computer Applications for Business **10103111** **3 Credits**
Introduces the student to Office 365 suite of products. This course includes software application basics and file management strategies to better organize, create, and maintain information to communicate in a business setting. Office 365 applications will be related to solving business problems, formatting business information, and creating business reports that integrates all features of Office 365.

Computer Apps in Farm Mgmt **30090347** **3 Credits**
This course will discuss basic computer literacy, identify commonly used software and demonstrate the uses of commonly used software. Students must be actively engaged in production agriculture to enroll in this course.

Computerized Accting Syst **10101125** **3 Credits**
This course applies basic accounting principles in a computerized environment using accounting business software. The integrated program includes general ledger, accounts payable, accounts receivable, inventory and payroll. The software utilized in this course requires a Windows-based PC.

Connecting Things **10631115** **2 Credits**
This course explores all the stages related to identifying a problem that is solvable by IoT. It then discusses designing and building an IoT system to solve that problem. Intended for anyone who has an interest in learning how to design and build IoT devices. This course includes activities that expand on the course material.

Construction Detailing **10614141** **2 Credits**
This course guides students in the process of creating architectural detail drawings. Details will be properly annotated and placed on construction documents in a clear and understandable manner. Students will learn about the role of construction detailing in ensuring the safety, durability, and functionality of a building, as well as its impact on the overall aesthetic quality of the structure. The course will cover a range of topics with a focus on detailing the building envelope.

Construction Fundamentals **10410105** **2 Credits**
Students study methods and materials used in construction to include footings and foundations, walls, floors, and roofs. Students will examine various insulation types and moisture and air control layers. Additionally, students will be introduced to construction documents. The safe use of the appropriate tools for each trade is covered.

Construction Industry Basics **10410103** **2 Credits**
This course provides an overview of the professions found within the construction industry. Students will research skills necessary for success within their chosen field and correlate to their personal strengths. Students will also learn to interpret architectural construction documents and be introduced to the assemblies that make up a building. An exploration of building science principles will provide a foundation for future coursework.

Construction Project Management **10481118** **2 Credits**
Students will learn the basics of construction project management, including scheduling, cost estimation for materials and labor, invoicing, and contracts.

Consumer Behavior **10104111** **3 Credits**
Explore how and why people behave as buyers, either business or consumer. You will determine behavior from analyzing consumer needs and wants, the process by which they are satisfied with a product or service, the environment in which the behavior occurs, and ensure post-purchase satisfaction by applying consumer behavior concepts to strategic marketing decisions. You will also examine the differences between online consumer behavior (via internet, mobile, e-commerce, and information technology) and in-person consumer behavior (via traditional methods of retail B2C and B2B sales).

Contemporary Healthcare Practices **10501104** **2 Credits**
An introduction to the culture of healthcare for students interested in working in various healthcare settings. Learners examine professionalism, interpersonal and written communication skills, problem-solving skills and patient privacy and confidentiality issues as they relate to healthcare.

Contemporary Moral Problems **20809262** **3 Credits**
In this course, after a brief introduction to philosophy, and some basic ethical theories, we shall critically examine, analyze, and discuss many different contemporary moral issues. Topics that will be covered include, but are not limited to: the treatment of non-human animals, war, the legalization of drugs, sexual morality, gun control, the death penalty, abortion, euthanasia, environmental issues, etc.

Content Marketing **10104177** **3 Credits**
Explore content marketing strategies and their effectiveness; such as creation, curation, and repurposing. You will learn to write compelling copy for a variety of audiences and marketing uses, develop a business personality, tone, and voice, and get the right message to the right people through the right media. Includes optimizing headlines, taglines, call-to-actions, infographics, emoji's, hashtags, and copy for effectiveness by using keywords, semantics, credibility, and the correct word choices.

Content and Copy Writing **10104168** **2 Credits**
Explore content marketing strategies and their effectiveness; such as creation, curation, and repurposing. You will learn to write compelling copy for a variety of audiences and marketing uses, develop a business personality, tone, and voice, and get the right message to the right people through the right media. Includes optimizing headlines, taglines, call-to-actions, infographics, emoji's, hashtags, and copy for effectiveness by using keywords, semantics, credibility, and the correct word choices.

Correctional Administration **10504838** **3 Credits**
This course provides an examination of corrections organization and administration. It emphasizes managerial theory, motivation, and provides guidance on the development of a competent and appropriate supervisory, managerial, and administrative style for the leadership of correctional personnel.

Correctional Law **10504837** **3 Credits**
This course provides an analysis of the law governing the treatment of the accused to the convicted offender. It examines the individual rights throughout the process and provides guidance to ensure rights are protected along with potential consequences for rights violations.

Corrections in America **10504820** **3 Credits**
This course provides an overview of the field of corrections. It introduces the historical development of corrections and emphasizes many of the correctional processes from custodial/institutional placement of offenders to community based correctional programming.

Cost Accounting **10101149** **4 Credits**
This course is an introduction to cost accounting with an emphasis on the principles of job order, process, and standard cost accounting procedures. The course covers accepted procedures used in service, merchandising, and manufacturing enterprises. Accounting for materials, labor, factory overhead, standard costing, and management decision processes are studied in detail.

Creative Writing **20801240** **3 Credits**
Students learn to manage the creative process through exercises and activities that lead to short stories and poetry; drama and creative non-fiction may be addressed as well. Reading assignments allow students to become familiar with principles and practice of various genres of creative writing and classroom activities prepare students for participating in workshop discussions.

Creative Writing - Nonfiction **20801244** **3 Credits**
Students merge literary techniques with the skills of reportage to develop works of creative non-fiction. Reading assignments allow students to become familiar with principles and practice of writing literary non-fiction including memoir, articles, and features. Class meetings follow a workshop format.

Crime, Analysis, Intel & Mapping **10504864** **3 Credits**
This course provides an exploration of the uses of data and field information in: crime analysis, criminal intelligence, and crime mapping and the integration of analysis to facilitate efficient investigations, and crime prevention.

Criminal Justice Report Writing **10504829** **3 Credits**
This course provides an examination of the essential ingredients of objective, accurate, thorough, and comprehensive report writing. Specialized writing techniques are examined and demonstrated to and by students for entry level practitioner competence.

Criminal Procedure **10504822** **3 Credits**
This course provides a survey of the criminal justice process from investigation to conviction. It emphasizes sources of law governing each stage of the process and the rights of those accused and decision-making factors related to policing, courts, and corrections.

Criminal Procedures **10110168** **3 Credits**
This course focuses on the theory and practical application of criminal law and procedure. Students will acquire knowledge that will enable them to assist attorneys practicing in the field of criminal law either as prosecutors or defense attorneys.

Criminology **10504827** **3 Credits**
This course provides an examination of criminology, including theories, basic assumptions, and definitions.

Critical Care Transport - Paramedic **10531115** **5 Credits**
The Critical Care Transport-Paramedic course is designed to prepare Wisconsin paramedics to function as critical care transport team members. Critically ill or injured patients requiring transport between facilities need a different level of care from hospital or emergency field patients. This course provides students with knowledge of the special assessment techniques and needs of the critical care patient, the ability to operate and troubleshoot critical care transport equipment, and develops the skills necessary to maintain the stability of the critical care patient during transport. This course follows the Wisconsin curriculum for license endorsement as a Critical Care Paramedic.

Crop Management **10006139** **3 Credits**
Course will provide the student knowledge necessary to plan, produce, protect, harvest, and store commodity crops commonly produced in Wisconsin. Specific attention will be given to variety selection, seed bed preparation, fertilization, planting, weed control, insect control, disease control, harvesting, drying, and storing of crops. Harvest losses, yield determination, and Integrated Pest Mgt. will also be included. Commodity grading, sample collection, and the calibration of yield monitors will be covered. Students will demonstrate the ability to perform a crop profitability comparison.

Crop Management **30090333** **3 Credits**
This course is designed to enable the student to become acquainted with the area's major crops and approved practices dealing with the efficient growth, harvest and marketing of the harvested crops. Lessons on managing crop harvest and storage to prevent loss of product and income, interpreting production records, and utilizing emerging technology will be taught. Students will also prepare a marketing plan and investigate alternative cropping methods including organic production and cover crops. All classes in the Farm Business and Production management program include instruction on financial analysis and management of the farming operation.

Crystal Report Writer with SQL **10154161** **3 Credits**
Students will create and modify reports using Crystal Report Writer. Record selection, sorting, grouping, summarizing, queries, exporting to other formats, parameters, formulas and subreports are among the topics covered.

Culinary Fundamentals I **10317172** **4 Credits**
Students learn basic kitchen principles of food safety, kitchen organization, knife skills, recipe proficiency, equipment and small wares identification and usage. Basic principles of vegetable, starches and grains preparation and presentation are taught. Study is made of various cooking methods/styles/trends and procedures applied to these categories.

Cultural Diversity in Criminal Justice **10504866** **3 Credits**
This course provides an overview of race and ethnicity issues within criminal justice. It explores race as a social construct and how ethnicity affects the lives of people within the justice process.

Cultural Issues in Human Ser **10520105** **3 Credits**
This course prepares learners to critically examine multicultural issues in our community and society. Learner will acquire a foundational understanding of key concepts including culture, multiculturalism, assimilation, pluralism, citizenship, immigration, and refugee status. Learner will gain appreciation for how these concepts reflect global processes and impact community members' lives and society.

Custod. Safety - OSHA **30519324** **1 Credits**
Prepares students for custodial service employment. Introduces students to safety in the work place, hazard communication and bloodbourne pathogen protection. Students will gain knowledge of chemical fundamentals and safe handling of cleaning chemicals.

Customer Service Management **10109126** **2 Credits**
Students apply the principles of good customer service management 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.

Cybersecurity Essentials **10151101** **2 Credits**
Cybersecurity Essentials develops foundational understanding of cybersecurity and how it relates to information and network security. Students are introduced to characteristics of cyber crime, security principles, technologies, and procedures to defend networks and implement data confidentiality, integrity, availability and security controls on networks, servers and applications. This includes security principles, policies, e-discovery and cybersecurity laws.

Cybersecurity Operations **10151110** **3 Credits**
Cybersecurity Operations covers the knowledge and skills needed for a Security Analyst working with a Security Operations Center team. It imparts the core security skills needed for monitoring, detecting, investigating, analyzing and responding to security events in order to protect systems and organizations from cybersecurity risks, threats and vulnerabilities.

DC/AC 1 **10660115** **3 Credits**
DC/AC 1 provides the fundamental concepts of Powers of 10 notation, an introduction to voltage, current and resistance, and their relationship expressed with Ohm's Law. This course also introduces series and parallel circuits as well as combination circuits. The course concludes with an introduction to magnetism, electromagnetism and alternating voltage and current. Circuits will be constructed in the lab using both actual components and simulation software.

DC/AC 2 **10660116** **3 Credits**
DC/AC 2 provides the fundamental concepts of analyzing complex resistive networks with network theorems such as the superposition theorem, Thevenin's Theorem and Norton's Theorem, and applied trigonometric concepts. Also covered in this course is complete coverage of capacitance, inductance and transformers, as well as RC, RL and RLC circuits. The course concludes with coverage of RC and L/R time constants, resonance and filters. Circuits will be constructed in the lab using both actual components and simulation software.

DC/AC III **10662112** **3 Credits**
This course covers the advanced circuit analysis concepts and techniques used by electronic engineering technologists. After reviewing Kirchoff's Laws, phasors, and impedance, focus is placed on superposition, mesh and nodal analysis, Thevenin's and Norton's theorems, complex power, and ideal transformers. Computer simulations will be used to reinforce theoretical analyses. Students will perform lab experiments and prepare technical reports.

Data Analytics **10102221** **3 Credits**
Students will explore and utilize advanced analytical tools used in business. Emphasis will be placed on interpreting data to make decisions that meet the business need.

Data Analytics Capstone **10156109** **3 Credits**
Complete a comprehensive analytics project using skills developed in data collection, cleaning, analysis, visualization, and interpretation to arrive at appropriate conclusions applied to real-world scenarios. Students will also be given the opportunity to provide project feedback including recommendations for improvement or extensions.

Data Communications and Networking **10662140** **3 Credits**
This course is an overview of fundamental concepts and technologies used in computer networks and digital communications. Network OSI Model and Internet (TCP/IP) Model and layers will be studied including their function, protocols, and services. Topics regarding network design concepts will be covered including LAN, WLAN, WAN, and Internet topologies and functions along with associated hardware. Students will be familiar with new technologies and applications such as IoT and Cloud-based services. Communication technology and hardware including serial communication, Analog to Digital conversion, modems, routers, switches, multiplexers, and modulation waveforms will be discussed.

Data Governance & Ethics **10156104** **3 Credits**
Identify data governance structures and examine ethical considerations around data collection, sharing, and reporting.

Data Integration and Prioritization **10102216** **2 Credits**
Students will further refine their skills in requirements documentation and validation by tracing and prioritizing solution requirements. Students will identify, measure, and validate solution requirements to support organizational change; while complying with organizational standards.

Data Modeling **10156101** **2 Credits**
Learn how data modeling is used to manage data within an organization's business environment. Explore the model design framework using an entity-relationship diagram and by building conceptual, logical, and physical data models that conform to business needs and requirements. Discover why dimensional data models are a useful tool in business intelligence applications.

Data Utilization for Business **10102215** **3 Credits**
Students will gain exposure to various tools used to assemble, organize, and manage data sets. Emphasis will be placed on exploring how data is used to make business decisions.

Data Visualization & Reporting **10156103** **2 Credits**
Learn best practices for visualizing data depending on its type and the story being told. Create and share dashboards and reports using Power BI and SQL Server Reporting Services. Build multi-page apps that feature interactivity and advanced design elements.

Database Development with .NET **10152191** **3 Credits**
This course allows students to use a .NET language with a database. Advanced topics include creation of controls, database manipulation using ADO.Net, reusable class creation and use, and integrating XML and ADO.Net.

Database Foundations with SQL **10154108** **3 Credits**
This is a fundamental course in database concepts design and analysis. Students will utilize Microsoft Access to develop a general understanding and reference for database management software (DBMS), relational database creation, querying, and reporting. Students will then learn Structured Query Language (SQL) and utilize a database Server to create tables, write queries, and update relational databases.

Database Server Administration **10154145** **3 Credits**
This course provides students with a technical and administrative overview of installing, securing, backing up, restoring, importing/exporting, logging, monitoring and troubleshooting relational database systems. In addition to administrative functions, students will understand core database concepts which include querying, relationships, transactions, schema definitions, referential integrity, constraints and data normalization.

Decision Optimization & Simulation **10156107** **2 Credits**
Use a variety of software tools for implementing operations research techniques to model and find optimal solutions for business scenarios, including those involving elements of chance. Application areas may include production, transportation, inventory, and queuing.

Dental & General Anatomy **10508304** **2 Credits**
Prepares dental assistant students to apply fundamentals of general and dental anatomy to informed decision-making and to professional communication with colleagues and patients.

Dental & General Anatomy **31508304** **2 Credits**
Prepares dental assistant students to apply fundamentals of general and dental anatomy to informed decision making and to professional communication with colleagues and patients.

Dental Assistant Clinical **31508306** **3 Credits**
Students apply skills developed in Dental and General Anatomy, Dental Health Safety, Dental Chairside, Dental Materials, Dental Radiography and Professionalism in a clinical setting with patients. Emphasizes integration of core abilities and basic occupational skills.

Dental Assistant Clinical - Adv **31508311** **2 Credits**
Dental Assisting students apply skills developed in Dental Chairside- Advanced, Dental Lab Procedures, Dental Radiography- Advanced, and Dental Office Procedures in a clinical setting with patients. Emphasizes integration of core abilities and basic and advanced occupational skills.

Dental Assistant Professional **31508307** **1 Credits**
Prepares dental assistant students for entering the workforce. Students develop professional appearance and prepare a resume, cover letter and professional development plan. Helps students develop and apply high professional and ethical standards. Students apply the laws that govern the practice of all members of a dental team and the community. Emphasis is placed on maintaining professionalism which includes confidentiality and informed consent.

Dental Chairside **31508302** **5 Credits**
Prepares dental assistant students to chart oral cavity structures, dental pathology, and restorations and to assist a dentist with basic dental procedures including examinations, pain control, amalgam restoration, and cosmetic restoration. Students will also develop the ability to educate patients about preventive dentistry, brushing and flossing techniques, and dental procedures, using lay terminology. Throughout the course, students will apply decoding strategies to the correct use and interpretation of dental terminology.

Dental Chairside - Advanced **31508308** **5 Credits**
Prepares dental assistant students to adapt chairside skills to assisting with dental specialties as they are performed in general practice. Focuses on pediatric dentistry, orthodontics, oral maxillofacial surgery, endodontics, periodontics, and prosthodontics. Students will also develop the ability to assist with sealants, perform coronal polishing, and apply topical fluoride and topical anesthetics.

Dental Health Safety **10508101** **1 Credits**
Prepares dental auxiliary students to respond proactively to dental emergencies, control infection, prevent disease, adhere to OSHA Standards, and safely manage hazardous materials. Students also take patient vital signs and collect patient medical / dental histories. This course is a WTCS aligned course required in both the Dental Hygienist and Dental Assisting Programs.

Dental Laboratory Procedures **31508309** **4 Credits**
Prepares Dental Assistant students to produce alginate impressions and fabricate diagnostic models, oral appliances, temporary restorations, and custom trays. Students also polish oral appliances.

Dental Materials **10508113** **2 Credits**
Prepares dental auxiliary students to handle and prepare dental materials such as liners, bases, cements, amalgam, resin restorative materials, gypsum products, and impression materials. They also learn to take alginate impressions on manikins and clean removable appliances. This course is aligned to serve students in the Dental Hygienist and Dental Assistant programs.

Dental Office Management **10508120** **2 Credits**
Prepares dental auxiliary students to manage telephones, appointments, recall systems, and inventory. Students also develop the skills needed to process accounts receivable and payable, collections, and third party reimbursements.

Dental Radiography **10508103** **2 Credits**
Prepares dental auxiliary students to operate x-ray units and expose bitewing, periapical, extra oral, and occlusal radiographs. Emphasis is placed on protection against x-ray hazards. Students also process, mount, and evaluate radiographs for diagnostic value. In this course students demonstrate competency on a manikin. In addition, students expose bitewing radiographs on a peer, role-play patient. Students gain further experience in exposing radiographs on patients in the clinical portion of their program. This course also provides the background in radiographic theory required for students to make informed decisions and adjustments.

Dental Radiography - Advanced **31508310** **1 Credits**
Builds on principles and skills developed in Dental Radiography. Dental Assisting students expose full mouth series, extra oral and specialized radiographs on adult and child patients. Emphasis is placed on protection against x-ray hazards. Students will also process, mount, and evaluate radiographs for diagnostic value. In addition, they will use radiographs to explain dental health and treatment plans to patients.

Design Analysis **10606158** **3 Credits**
Design principles of certain machine elements are considered and calculations made for the determination of their size and shape. The use of CAD and CAE software for mechanical analysis will be introduced. Topics include shafts, couplings, keys, bearings, gear, belt and chain drives.

Design Field Experience/Co-op **10304133** **1 Credits**
This course provides students with a unique opportunity to acquire practical experience in a professional design setting. Working alongside experienced designers and architects, students gain insights into teamwork, industry standards, and project coordination. While meetings with faculty foster reflection, critical thinking, and self-assessment. The internship experience will also provide a platform for discussing challenges, successes, and lessons learned with the next generation of Western interior design students. The internship course can be taken any time after completion of Advanced Residential Design and typically lasts for one academic semester or a summer session.

Design Fundamentals **10201112** **3 Credits**
Creative ability of each student will be directed toward the layout, design and production of graphic design related projects. Through lectures, demonstrations and lab assignments, students will create and design projects utilizing a variety of materials and techniques.

Design Problems **10606164** **4 Credits**
An opportunity to integrate the knowledge & skills acquired during the program by completion of a design of a mechanical device. Project completion requires definition of the product reqmt's, analysis of the load conditions, selection of mtls, conduct stress analysis and motion simulations, prepare layouts, detailed drawings & a final written and oral report to summarize their work. Rapid prototypes of final project will be made.

Design Team Integration **10304139** **1 Credits**
Students will demonstrate their understanding of project team dynamics, and culture. An exploration of collaborative communication and benchmarking to examine proposed design solutions relative to best practices and industry standards. Curriculum will focus on essentiality of high emotional intelligence for success.

Design and Graphic Fundamentals **10304102** **3 Credits**
This fundamental theory and graphic art course is designed to provide students with a foundational understanding of the principles of design, color theory, and visual composition while mastering Adobe Photoshop. Through a combination of theoretical knowledge and practical exercises, students will effectively learn to leverage this powerful design tool to edit, manipulate and enhance images and illustrations. Students will gain practical experience in designing professional-grade, visually compelling graphics, illustrations, and compositions for various mediums.

Designing with Type **10201122** **3 Credits**
This course focuses on expanding the students application of all course material learned in Design Fundamentals. Integrating typography & visual elements through targeted real-life design projects will greatly improve students problem solving and designing abilities. Students gain experience in using the design process & analyzing their work. This course relies on the Macintosh computer as a significant tool in solving typographical problems.

Developmental Psychology **10809188** **3 Credits**
Developmental Psychology is the study of human development throughout the lifespan. This course explores developmental theory and research with an emphasis on the interactive nature of the biological, cognitive, and psychosocial changes that affect the individual from conception to death. Application activities and critical thinking skills will enable students to gain an increased knowledge and understanding of themselves and others.

Diesel & Heavy Equipment Internship **32412417** **1 Credits**
Student will be responsible to secure an internship in a Diesel or Heavy Equipment repair facility. The student can work in multiple areas of the business including parts, service reception and service repair department. This position must be approved by your program student advisor.

Diesel Advanced Electricity **32412412** **3 Credits**
This course is a practical study in the procedures associated with the diagnosis and troubleshooting of electronically controlled systems using manufacturer software and other diagnostic equipment.

Diesel Advanced Engines **32412409** **2 Credits**
This course is a practical study in the procedures associated with diagnosis and repair of electronically controlled engines and exhaust after treatment systems.

Diesel Basic Engines **32412303** **3 Credits**
This course is a practical study in performing diesel engine component familiarization and inspection.

Diesel Electricity Fundamentals **32412406** **3 Credits**
This course is a practical study introducing the student to basic fundamentals of electricity including test equipment, batteries, starting systems, charging systems, and lighting systems.

Diesel Electricity Troubleshooting **32412407** **3 Credits**
This course is a practical study in performing diagnosis and repair of cab and chassis accessories, and other electrical components.

Diesel Engine Rebuilding **32412408** **3 Credits**
This course will familiarize the student with all the internal components of a diesel engine with a major emphasis placed on disassembly, inspection, reconditioning and assembly of a variety of diesel engines used in industry. Engine component failure analysis and prevention will also be covered.

Diesel Engines Advanced **32412419** **3 Credits**
This course is designed to familiarize diesel technician students with the basics of home standby/commercial generators and heavy-duty electric vehicle systems. Instruction will include a strong emphasis on safety as well as electrical fundamentals, alternators, permanent magnet generators, circuit breakers, high voltage components, electric vehicle motors, and gear reduction system types.

Diesel Heavy Equip Inspec & Prev Maint **32412415** **3 Credits**
This course is a practical study of performing preventive maintenance inspections on off road equipment. Students will learn what defects to inspect for and how to follow a preventive maintenance schedule to prevent costly repairs and unsafe conditions.

Diesel Heavy Equipment Live Repair **32412416** **3 Credits**
This course is designed to familiarize the student with the procedures involved in the repair of on and off highway equipment. Hands-on experiences will be gained through the repair of such equipment as loaders, crawlers, graders, backhoes, trucks and many other types of equipment used in industry. The type of equipment varies and must meet the needs of the students and program.

Diesel Heavy Equipment Powertrains **32412413** **3 Credits**
This course is a practical study in the procedures associated with diagnosis and repair of heavy equipment transmissions, differentials, final drives, drivelines, and braking systems.

Diesel Heavy Truck & Forklift Familiariz **32412405** **1 Credits**
This course will familiarize the student with heavy truck operation, coupling and uncoupling trailers, and forklift operations.

Diesel Hydraulic/Hydrostatic Systems **32412414** **3 Credits**
This course is a practical study of diagnosis, repair, and failure analysis of hydraulic and hydrostatic systems.

Diesel Online Service Utilization **32412403** **2 Credits**
This course will introduce the student to the online service information utilized by the diesel and heavy equipment industry. Students will develop the skills to search and navigate the various websites for operating instructions, measurements, specifications, system tests, repair procedures and troubleshooting procedures.

Diesel Safety and Industry Practices **32412404** **2 Credits**
This course will introduce students to the safety and legal requirements and common shop practices of the diesel and heavy equipment industry. Personal safety as well as overall shop/job site safety will be emphasized while students learn to operate shop equipment and learn basic repair techniques common to all aspects of the diesel and heavy equipment industry. Skills learned in this course will be directly applied throughout the diesel and heavy equipment technician program.

Diesel Truck Brake Systems **32412351** **3 Credits**
This course is a practical study in performing diagnosis and repair of heavy truck braking systems.

Diesel Truck Chassis Systems **32412402** **3 Credits**
This course is a practical study in performing diagnosis and repair of heavy truck chassis systems and components.

Diesel Truck Powertrains **32412401** **3 Credits**
This course is a practical study in performing diagnosis and repair of heavy truck transmissions, differentials, and drivelines.

Diesel Truck Preventive Maintenance **32412400** **1 Credits**
This course is a practical study in performing heavy truck preventive maintenance inspections as well as Department of Transportation annual vehicle inspections.

Digital Advertising **10104176** **3 Credits**
Explore the world of advertising on the Internet through display, text, pay-per-click, mobile, email and text messages. You will learn how to initiate, manage and evaluate digital advertising effectively and efficiently.

Digital Applications **10660132** **1 Credits**
A continuation of Digital Fundamentals- this course will explore applications of some of the concepts and components introduced previously and will add other components and their application. Some applications are: D/A and A/D conversion, shift registers, timing and counting. The 555 timer and concepts of astable and monostable operation will be presented along with concepts of timing and duty cycle.

Digital Design Components **10104175** **2 Credits**
How do you know when to use a jpeg, pdf, tiff or gif? When do you use CMYK or RGB? What size and resolution do you need for a printed document versus a web site? You will learn all of the specifications, lingo and abbreviations that graphic designers, publishers, web designers and marketing professions use on a daily basis. You will learn the basics of print and web design components to enable you to make informed decisions.

Digital Drawing and Drafting **10601127** **2 Credits**
This course provides students with an in-depth understanding of digital drafting and drawing techniques as they relate to HVAC design and installation. Students will learn how to use industry-standard computer-aided design (CAD) software and other digital tools to create accurate and detailed HVAC drawings and schematics. The course will cover various aspects of digital drafting and drawing for HVAC, dimensioning, annotation, and layering. Students will learn how to create and edit HVAC drawings and schematics using CAD software, as well as how to export and import to manage drawings in different file formats.

Digital Electronic Concepts **10662137** **4 Credits**
This course provides a foundation in digital electronic device and circuits. Topics include number systems, logic gates, digital circuits simplification techniques, device specifications, digital devices such as encoders/decoders, multiplexers/de-multiplexers, programmable devices, A/D and D/A circuits and interfacing circuits and considerations

Digital Fundamentals **10660131** **1 Credits**
This course introduces the concepts of digital logic. Digital number systems and basic logic gates are covered. Emphasis is placed on providing a foundation for the application of digital logic to the use of digital applications such as D/A- A/D converters and programmable logic controllers.

Digital Literacy for Healthcare **10501107** **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 (EHR). Healthcare EHR security issues, social media use, and digital healthcare resources are examined.

Digital Media Application **10206119** **3 Credits**
This course will provide opportunities to fine tune production skills in a real world working environment. A large part of this course is community engagement based, where students will work both individually and in production teams, with real clients (local non-profit organizations), to address specific media and communication needs. They are expected to create professional quality video and media products, while assuming responsibility for client meetings, all media production and post-production (including crew assignments), as well as proper and timely media delivery. The transition from school to doing what you love starts here.

Digital Media Portfolio **10206145** **3 Credits**
The student will learn how to prepare for industry employment. From audio production to marketing, video creation to promotions- learn how to craft and tailor your work to apply for specific media jobs. Course topics include creating an online presence, designing a resume, writing using industry buzz words, showcasing your best work, job interviewing techniques, and critiquing portfolio work. The student will create a portfolio- an important tool for seeking employment- that will help them stand out from the competition.

Digital Photography 1 **10203125** **3 Credits**
Students will use digital cameras to create digital images. Basic image manipulation and output will be taught using Adobe Creative Cloud software in a Mac based environment. Topics and projects include (but are not limited to) composition, lighting, depth of field, landscapes, portraits, product photography, and creative production planning. Students are required to provide a camera for the course. Before beginning, you should have a basic working knowledge of your computer and its operating systems.

Digital Photography 2 **10701107** **3 Credits**
Students will deepen their photography skills in this advanced course through exploring visual storytelling, camera settings, lighting, post-processing, client interactions, and business strategies. The curriculum covers advanced techniques in studio and location flash lighting, Adobe Lightroom, and Photoshop editing. Emphasis is placed on the art of storytelling, finding inspiration, effective communication with clients and models, trend analysis, and pricing strategy. The goal is to prepare students for a photography career.

Dining Room Theory **10317111** **1 Credits**
This course introduces the principles, concepts, and systems of professional table service. Topics include dining room organization, scheduling, and management of food service personnel, with an emphasis on developing appropriate customer service skills.

DisAbilities **10520118** **3 Credits**
DisAbilities prepares students to work with individuals and families impacted by disAbilities. A variety of disAbilities and issues common to persons with disAbilities will explored. Perspectives of disabilities that recognize disAbility as a culture and acknowledge the potential and capabilities of persons with disAabilities are offered.

Discovery and Needs Analysis **10102212** **2 Credits**
Students will utilize stakeholder analysis to conduct requirement elicitation and planning activities. Emphasis will be placed on identifying stakeholder needs while capturing information through a variety of discovery techniques including the facilitation of meetings.

Diversity & Change Mgmnt **10196169** **3 Credits**
Addresses changes taking place in the workforce and their affect on the supervisor and the organization. Explores a broadened view of diversity, including values, age, gender, disabilities, education and culture. Provides an action framework for the supervisor to gain advantage by blending and capitalizing on the different skills and perspectives of people and creating an organization where everyone gives his or her best.

Drawing **10201118** **3 Credits**
Course is designed to familiarize the student with many of the skills and techniques of drawing. Student will gain skills in capturing seen objects on paper. Student will increase observation abilities while improving his or her ability to communicate visual concepts.

Drive Systems 1 **32404357** **3 Credits**
A study of the driveline component parts with an emphasis on diagnosis, maintenance and repair procedures, drive axles and shafts, bearings and seals and manual transmissions/transaxles.

Drive Systems 2 **32404367** **3 Credits**
A study of the driveline component parts with an emphasis on diagnosis, maintenance and repair procedures, manual transmissions/transaxles, drive axles systems and four-wheel drive/All wheel drive systems.

E-Commerce **10104106** **3 Credits**
You can buy or sell anything online! Students will learn to determine if that is the case and where is it best to sell- stand alone or an online marketplace. You will learn about the steps to set up an e-commerce web site including shopping carts, payment gateways, and converting order processing into a shopping cart process. This class will also discuss some of the laws and regulations to consider and explore for domestic and global e-commerce.

ECE: Advanced Practicum **10307199** **3 Credits**
In this final 3-credit practicum course you will demonstrate competence in supporting child development through observation, assessment and implementation of teaching strategies as you work in and learn about and apply the course competencies in an actual early childhood setting. You will demonstrate a high level of skill in fostering relationships with children, families and early childhood professionals, and use skills learned in a lead teacher role to develop a career plan to transition from student to early childhood education professional.

ECE: Child Development **10307179** **3 Credits**
The 3-credit course examines child development within the context of the early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze social, cultural, and economic influences on child development; summarize child development theories; analyze development of children ages three through five; analyze development of children ages five through eight; relate child development research findings to teaching practice; analyze the role of heredity and the environment; examine the role of brain development in early learning (ages 3-8); examine developmental and environmental assessment strategies for children ages 3-8.

ECE: Children w Diff Abilities **10307187** **3 Credits**
This 3-credit course focuses on the child with differing abilities in an early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; promote inclusive programs for young children; apply legal and ethical requirements including, but not limited to, ADA and IDEA; examine the consultation process to embed intervention in natural based settings; differentiate between typical and exceptional development; analyze the differing abilities of children with physical, cognitive, health/medical, communication, and/or behavioral/emotional disorders; identify community and professional resources; interpret an individual educational plan (IEP/IFSP) for children with developmental differences; adapt curriculum to meet the needs of children with developmental differences; examine strategies for cultivating partnerships with families who have children with developmental differences.

ECE: Early Language & Literacy **10307108** **3 Credits**
This course explores strategies to encourage the development of early language and literacy knowledge and skill buildingin children birth to 8 years of age. Learners will investigate the components of literacy including; literacy and a source of enjoyment, vocabulary and oral language, phonological awareness, knowledge of print, letters and words, comprehension and an understanding of books and other texts. Theories and philosophies regarding children's language and literacy development will be addressed. Dual language learning will be examined within the context of developmentally appropriate practices. Assessment tools for early language and literacy acquisition will be reviewed.

ECE: Family & Community Rel **10307195** **3 Credits**
In this 3-credit course you will examine the role of relationships with family and community in early childhood education. Course competencies include: implement strategies that support diversity, cultural responsiveness, and anti-bias perspectives when working with families and community; analyze contemporary family patterns and trends; identify strategies to strengthen and support families; explore effective communication strategies; discover strategies for developing respectful and reciprocal relationships with families; analyze strategies to promote family engagement in early childhood education programs; explore a variety of formats for meeting with families in their contexts; advocate for children and families; and explore community resources that provide a range of services for children and families.

ECE: Field Experience 1 **10307160** **3 Credits**
This 3-credit introductory field experience course, introduces the foundations of early childhood education under guided supervision of a mentor teacher in an early childhood setting, working with children birth through age 8. This course meets the requirements for the Wisconsin Model Early Learning Standards 18-hour training.

ECE: Field Experience 2 **10307170** **3 Credits**
This 3-credit intermediate field experience course includes assisting the mentor teacher in carrying out classroom routines and implementing developmentally appropriate learning experiences that promote child development and learning through play for children birth to age 8.

ECE: Field Experience 3 **10307190** **3 Credits**
This 3-credit advanced field experience course focuses on supporting young children's development birth to age 8 through observation, assessment, and implementation of developmentally appropriate teaching strategies.

ECE: Field Experience 4 **10307210** **3 Credits**
This final 3-credit pre-professional field experience course focuses on demonstrating a comprehensive understanding of children birth to age 8, and families. An emphasis is on practicing the lead teacher role to design, implement and evaluate a connected unit of learning experiences

ECE: Foundations of ECE **10307148** **3 Credits**
This 3-credit course introduces you to the early childhood profession. Course competencies include: explore the concepts of diversity, cultural responsiveness, and anti-bias as it relates to early childhood education, investigate the history of early childhood education, examine regulatory requirements for early childhood education programs in WI, summarize types of early childhood education settings, identify the components of a quality early childhood education program, summarize responsibilities of early childhood education professionals, explore early childhood curriculum models and examine the critical role of play as it relates to developmentally appropriate practice.

ECE: Guiding Child Behavior **10307188** **3 Credits**
This 3-credit course examines positive strategies to guide children's behavior in the early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze techniques for and effects of strong relationship-building with children and families; identify positive and proactive guidance principles and techniques to support children; analyze environmental influences on child behavior; identify strategies that support children's active engagement in the learning environment; identify strategies that proactively teach emotional literacy and regulation techniques; identify strategies that proactively teach friendship skills; identify strategies that proactively teach children calming, relaxation, and problem-solving techniques; utilize observation and assessment techniques to assess and interpret behavior; create a behavior support plan based on a functional behavior assessment; create a guidance philosophy. This course meets the requirements of the 24 hour Wisconsin Pyramid Model training.

ECE: Hlth Safety & Nutrition **10307167** **3 Credits**
This 3-credit course examines the topics of health, safety, and nutrition within the context of the early childhood educational setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; examine governmental regulations and professional standards as they apply to health, safety, and nutrition; plan a safe early childhood environment; plan a healthy early childhood environment; plan nutritionally sound menus; examine child abuse and neglect issues and mandates; describe Sudden Infant Death Syndrome (SIDS) risk reduction strategies, describe strategies to prevent the occurrence of Shaken Baby Syndrome (SBS); incorporate health, safety, and nutrition concepts into the children's curriculum.

ECE: Infant & Toddler Dev **10307151** **3 Credits**
In this 3-credit course you will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: integrate strategies that support diversity, cultural responsiveness, and anti-bias perspectives; analyze development of infants and toddlers (conception to thirty-six months); correlate prenatal and postnatal conditions with development; summarize child development theories; analyze the role of heredity and the environment; examine culturally and developmentally appropriate environments for infants and toddlers, examine the role of brain development in early learning (conception through thirty-six months); examine caregiving routines as curriculum; and examine developmental and environmental assessment strategies for infants and toddlers.

ECE: Infant Toddler Capstone **10307115** **3 Credits**
This course is intended to integrate the theory and practice learned in the previous three courses and apply that learning in the student's own infant and toddler setting. Students will also complete a professional infant and toddler portfolio.

ECE: Infant Toddler Group Care **10307169** **3 Credits**
This course focuses on caring for infants and toddlers in group settings, both center-based and family child care. It includes program quality, philosophy, structure, environments, health and safety, developmentally appropriate practice and inclusion/diversity issues.

ECE: Intermediate Practicum **10307177** **3 Credits**
In this 3-credit course you will be implementing regulations and standards for quality early childhood education, applying knowledge of child development and positive guidance, utilizing observation and assessment techniques, and assessing developmentally appropriate environments for children.

ECE: Introductory Practicum **10307174** **3 Credits**
In this 3-credit practicum course you will learn about and apply the course competencies in an actual early childhood setting. You will explore the standards for quality early childhood education, demonstrate professional behaviors, and meet the requirements for training in the Wisconsin Model Early Learning Standards.

ECE: Preschool Practicum **10307175** **3 Credits**
This course will apply as the capstone course in The Registry Preschool Credential. You will be placed or working in an early childhood setting with 3-5 year old children and create a portfolio that prepares you for The Registry commission. In this course you will be implementing regulations and standards for quality early childhood education, applying knowledge of child development and positive guidance, utilizing observation and assessment techniques, and assessing developmentally appropriate environments for preschoolers.

ECE: Professional Preparation **10307149** **2 Credits**
This 2-credit first term seminar course equips students with knowledge and essential training for a career in early childhood education. The course delves into the technical standards expected of early childhood education professionals, ensuring students know the necessary skills for success in the field. Upon completion, the student will understand important regulatory requirements and experience intensive health and safety training and comprehensive background check ensuring readiness for employment.

ECE: STEM **10307112** **3 Credits**
This 3-credit course will focus on beginning level curriculum development in the specific integrated content areas of science, technology, engineering and mathematics.

ECE: Soc S, Art, & Music **10307110** **3 Credits**
This 3-credit course will focus on beginning level curriculum development in the specific integrated content areas of social studies, art, music, & movement (SSAMM).

EDU: Behavior Management **10522105** **3 Credits**
Students analyze the behavior of students in educational settings. Emphasis will be given to examining the influences on behavior and creating proactive learning environments through behavioral interventions and support. Students will evaluate strategies for creating a safe and supportive classroom environment.

EDU: Child & Adol Dev **10522106** **3 Credits**
Students will analyze the physical, cognitive, and social-emotional development of children with an emphasis on school age children and adolescents. Students will examine environmental factors that influence child development. Developmental theories will be summarized and related to current teaching practices.

EDU: Equity in Education **10522112** **3 Credits**
Students analyze personal culture, explore cultural constructs, evaluate cultural bias in educational materials and analyze strategies to support English Learners. Students examine diversity in the classroom and develop techniques for supporting equity in the learning environment. In addition, students collaborate to identify service needs in the community and demonstrate professional collaboration skills through participating in a service learning project.

EDU: Intro to Ed Practices **10522103** **3 Credits**
Students analyze preK-12 education in the United States, determine roles and responsibilities of school personnel, and explore current issues, trends and best practices. Students identify how students learn and the foundations of lesson planning. Students analyze Assessment strategies, classroom management, and techniques for supporting learners.

EDU: Overview of Spec Ed **10522107** **3 Credits**
Students examine a historical overview of special education and special education law including special education disability categories as defined by the Individuals with Disabilities Education Act (IDEA). Students explore state and federal qualification special education criteria and societal responses to students with disabilities. Students examine the impact of a student with disabilities on family dynamics and the role school personnel play in supporting students with disabilities.

EDU: Practicum 1 **10522129** **3 Credits**
Students apply the skills learned in previous program courses in a school setting while under the supervision of a Department of Public Instruction certified teacher. Students support learners while demonstrating professionalism. Students begin the reflective process.

EDU: Practicum 2 **10522131** **3 Credits**
Students apply the skills learned in previous program courses in a school setting while under the supervision of a Department of Public Instruction certified teacher. Students support learners while building inclusive classroom environments. Students apply job search skills.

EDU: Support Students W/Healthcare Need **10522110** **3 Credits**
This course prepares the Educational Assistant student to work with school-age students in the school setting who have special healthcare needs. Management and care of chronic or acute physical health conditions, emergency healthcare management, and care of students with mental health issues will be examined. Adaptive equipment and assistive technology will be introduced and explored. Laws, policies, and the roles of school personnel and healthcare professionals will be outlined.

EDU: Supporting Stu w/Disab **10522124** **3 Credits**
Students identify research-based interventions for learners in categories defined by the Individuals with Disabilities Education Act (IDEA). Students interpret Individualized Educational Programs and examine special education related services available for learners. Students collect data to document student behavior and academic performance and recommend program adaptations and accommodations for students with disabilities while applying the concepts of least restrictive environment and inclusion.

EDU: Techniques in Lang Arts **10522114** **3 Credits**
Students will be introduced to the science and art of teaching language arts. Evidence-based approaches and assessments will be examined and practiced. Students will create a literature file through the exploration of a variety of children's/young adult literature.

EDU: Techniques in Math **10522118** **3 Credits**
Students learn key terminology and research-based strategies to support learners in math domains: numbers, base ten operations, algebraic thinking, geometry, probability/statistics and measurement and data. Current practice including manipulatives, problem-solving and assessment will be covered within the framework of state and national standards.

EDU: Techniques in Reading **10522102** **3 Credits**
The purpose of this course is to provide students with a solid foundation for effective literacy instruction in K- 9 grade classrooms. The course will focus on the major five elements of reading: phonemic awareness, phonics, vocabulary, fluency, and comprehension. Phonological Awareness will also be addressed. This course will review research-based teaching strategies, instructional materials as well as methods and assessments for effective and inclusive literacy instruction.

EDU: Techniques in Science **10522120** **3 Credits**
Students are introduced to the content and processes of teaching science. Students explore science processes, strategies, procedures, assessment options and factors affecting science learning. Students practice strategies for assisting with group and individual activities in science. This course provides a foundation in the concepts and models of hands-on, student-centered science and its assessment as described in WI DPI Science Standards and Next Generation Science Standards (NGSS).

EDU: Techniques in Soc Stu **10522119** **3 Credits**
Students analyze current content in social studies education as recommended by the National Council for Social Studies and Wisconsin DPI. Students design learning opportunities for the five content areas of social studies: Geography, History, Behavioral Sciences (Culture and Society), Political Science (Civics and Government), and Economics that incorporate the social studies inquiry practices and processes. Students receive training on the history, culture, and tribal sovereignty of Wisconsin's eleven federally recognized American Indian nations and tribal communities (Act 31) and the Holocaust and other genocides (Act 30) to meet Wisconsin teacher standards and teaching requirements.

EDU: Technology in Ed **10522104** **3 Credits**
The focus of this course is for students to teach and learn with information and technology rather than about information and technology. The Wisconsin Department of Public Education (DPI) states that "Information and Technology Literacy is the ability of a teacher, working independently or with others, to use tools, resources, processes, and systems responsibly to access and evaluate information in any medium, and to use that information to solve problems, communicate clearly, make informed decisions, and construct new knowledge, products, or systems." Students will analyze all aspect of information and technology literacy as well as begin their digital professional teaching portfolio.

EFDA Clinical **10508124** **2 Credits**
Expanded Functions Dental Auxiliary students apply skills developed in Preventative Procedures, Restorative Procedures and Prosthodontic Procedures in a clinical setting with patients under the direct supervision of a dentist.

EFDA Dental Procedures **10508121** **3 Credits**
Learn how to perform the placement and finishing of restorative materials after the dentist prepares a tooth for restoration. Includes the application of sealants and temporizations.

EFDA Preventative Procedures **10508122** **1 Credits**
Examine the role of the Expanded Function Dental Auxiliary in WI. Learn how to provide preventative procedures performed by the EFDA including coronal polishing and application of topical fluoride, fluoride varnish, or similar dental topical agents.

EFDA Prosthodontic Procedures **10508123** **2 Credits**
Learn how to perform dental prosthodontic procedures including adjustment of dentures and other removable oral appliances, impressions, packing cord, and removal of sutures and dressings.

EMR and EMT Part 1 **10531105** **2 Credits**
This course provides foundational knowledge for Emergency Medical Technician (EMT) candidates, and all requirements for Emergency Medical Responder (EMR) candidates. Topics include: basic anatomy and physiology, patient assessment, traumatic injury management, airway management, cardiac management and basic medical care. Upon successful completion, candidates will be eligible to participate in the National Registry of EMT's Emergency Medical Responder exams required for Wisconsin EMR certification.

EMS FUNDAMENTAL **10531911** **2 Credits**
This course provides the paramedic student with comprehensive knowledge of Emergency Medical Services (EMS) systems, safety, well-being, legal issues, and ethical issues, with the intended outcome of improving the health of EMS personnel, patients, and the community. The students will obtain fundamental knowledge of public health principles and epidemiology as related to public health emergencies, health promotion, and illness / injury prevention. Introducing students to comprehensive anatomical and medical terminology and abbreviations will foster the development of effective written and oral communications with colleagues and other health care professionals.

EMS Operations **10531922** **1 Credits**
This course provides the paramedic student with the knowledge of operational roles and responsibilities to ensure patient, public, and EMS personnel safety.

EMT Basic **10531109** **5 Credits**
Designed to train the student in care of the patient at the scene of an accident or sudden severe illness and during transportation to the hospital. The Emergency Medical Technician (EMT) integrates signs and symptoms and intervenes accordingly, and operates ambulance equipment necessary for lifesaving care.

EMT Part 2 **10531106** **3 Credits**
This course will further build upon the base knowledge of the EMR and EMT Part 1 course. Topics include: expanded anatomy, physiology, and pathophysiology, disease processes, more complex patient assessment and critical thinking skills. Additional skills will be covered as allowed by the Wisconsin Department of Health Services EMS Section Scope of Practice for EMT's. Upon successful completion, candidates will be eligible to participate in the National Registry of EMT's exams required for Wisconsin EMT licensure.

Economics **10809195** **3 Credits**
This course is designed to give an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues.

Electric Circuits for HVACR **10601111** **3 Credits**
This course will provide a comprehensive introduction to electrical principles and systems as they relate to the HVAC industry. The course will include the fundamental concepts of circuit analysis and AC steady-state analysis. Emphasis will be placed on the application of electric circuit principles to HVAC systems, including safe wiring practices, electronic controls, and troubleshooting procedures. Particular attention will be devoted to developing skills in reading electrical diagrams and executing diagnostic tests. Hands-on laboratory sessions that simulate real-world scenarios will be used to reinforce concepts and provide opportunities for students to demonstrate practical skills.

Electric Motors and Controls in HVACR **10601113** **3 Credits**
This course will provide theoretical and practical knowledge in refrigeration systems. Students will gain knowledge on how to carry out routine maintenance tasks, identify and repair various malfunctions common to refrigeration systems, and comply with industry regulations. Laboratory sessions that simulate realistic scenarios will enable students to apply learning into practical situations such as evacuation procedures, charging and testing of refrigerant according to environmental standards, monitoring devices for troubleshooting or calibration purposes.

Electromechanical Internship **10620180** **1 Credits**
In this course, students will be exposed to various activities within advanced manufacturing as they relate to the design, implementation, and maintenance of automated industrial systems. Students will work with an employer partner to experience how Electromechanical applications are applied to maintaining and troubleshooting equipment.

Electronic Circuit Analysis **10662124** **3 Credits**
A course in advanced topics in the analysis of electronic devices & circuits. Students are introduced to using frequency as a variable when analyzing circuits. Bode plots will be used to describe circuit characteristics. Analysis of resonant circuits will be covered in detail. Small signal analysis of transistor amplifiers will be emphasized to reinforce theoretical analyses. Students will perform lab experiments & prepare technical reports.

Electronic Devices **10660125** **4 Credits**
Electronic Devices provides the fundamentals knowledge of electronic semiconductor devices and circuits including diodes and rectifiers, zener diodes, LEDs, bipolar junction transistors (BJTs), and field effect transistors (FETs). Electronic circuits and their applications will be constructed and tested using both actual components and circuit simulation software.

Electronic Skills **10660108** **1 Credits**
This course will introduce fundamental electronic skills. Skills include utilizing industry tools, soldering / de-soldering of electronic components in printed circuit boards and utilizing proper ESD procedures.

Electronics Field Experience **10660107** **1 Credits**
This field experience will help connect classroom training to real world applications at a community center facility right here in our area. Elements from course material and classroom instruction will find practical applications when students perform tasks and duties that can be expected within the industry.

Electronics Project **10663170** **3 Credits**
As a capstone project this course will enhance and/or verify the Electronic and Computer Engineering Technology program outcome. The Student will complete a project that includes both a hardware and software component, a written report and an oral presentation. Included within in the written report will be a project description, a budget, timetable, schematics, drawings, recommendations for improvement, and a daily log of progress.

Electronics Projects Design **10663172** **1 Credits**
This course is part one of a capstone project where students will design a microprocessor /LabVIEW based project that will includes both a hardware and software component. This includes creating a budget, timeline, drawings, and schematics along with a daily log.

Electronics Projects Integration **10663174** **2 Credits**
This course is part two of a capstone project where students will enhance and/or verify the Electronic and Computer Engineering Technology program outcome. The student will build a microprocessor/LabVIEW project that includes both a hardware and software component, a written report and an oral presentation. Included within in the written report will be a project description, a budget, timetable, schematics, drawings, recommendations for improvement, and a daily log of progress.

Elem Algebra with Apps **10834110** **3 Credits**
This course offers traditional algebra topics with applications. Learners develop algebraic problem solving techniques needed for technical problem solving and for more advanced algebraic studies. Topics include linear equations, exponents, polynomials, rational expressions, and roots and radicals. Successful completion of this course prepares learners to succeed in technical mathematics courses.

Elementary Matrix & Linear Algebra **20804256** **4 Credits**
Elementary Matrix and Linear Algebra is designed for students of mathematics, science, and engineering. This course covers the principles of linear algebra and the theory of matrices with an emphasis in understanding the fundamental concepts and being able to perform calculations. An introduction to formal, logically sound proofs of important theorems is also integrated into the course.

Email Marketing **10104134** **3 Credits**
Email Marketing covers email marketing campaign development, building an email marketing list, choosing email marketing distribution software, writing appropriate email messages and employing email marketing analytics. The course will emphasize executing and monitoring email campaigns to achieve business objectives.

Embedded Systems **10662134** **4 Credits**
Embedded systems are used in commercial, consumer, and residential products. This course will introduce the student to the fundamentals of embedded system design. The architecture of the microcomputers and microcontrollers will be discussed including, memory systems and devices, bus systems, A/D and D/A conversions, serial and parallel communications, timers and counters, interrupts and interfacing to various external devices. Microcontroller board-based modules on the AVR/ARM microcontrollers such as Arduino Uno will be covered. Assembly and C language programming will be used to learn embedded systems development.

Emerging Ag Technologies **10006180** **3 Credits**
Students will gain knowledge and experience in the four key areas of accelerating change in agricultural technology: Sensors, Food, Automation and Engineering. Sensors included air & soil sensors, equipment telematics, livestock biometrics, crop sensors, and infrastructural health sensors. Food technology includes genetically designed food and In vitro meat. Automation technology includes variable rate swath control, selective breeding, agricultural robots, precision agriculture. Closed ecological systems, synthetic biology, and vertical farming are included in engineering technology.

Emerging Technologies in Digital Media **10701170** **3 Credits**
This course looks to both the past and the future. By exploring film theory, learners will pick up the audio-visual vocabulary, tools and technology used in motion pictures through a mix of lecture, video screenings, discussion and other reflections. Learners will be exposed to a variety of videos, films, genres and technical innovations. At the same time, learners will look to the future, exploring what's current in Digital Media and how they fit in it. Students will explore some more niche skills to best prepare themselves to stay on the cutting edge of the Digital Media Production Field. Students are encouraged to bring their own ideas and interest to help drive the course content.

Employee Benefits **10116163** **3 Credits**
Explore total rewards programs including health insurance, retirement, protection programs, paid time off, and accommodation and enhancement benefits. Students will learn about benefits regulation, administration, cost control, and future trends.

Employee Relations **10116136** **3 Credits**
Employee relations examines the efforts to maintain positive relationship between employers and employees while managing performance both positive and negative, up to and including the termination process. Students will also learn about the investigation process, and practice conflict resolution.

Employment Law **10116158** **3 Credits**
In this course students will explore federal and state employment laws to incorporate them into business practices.

Energy & Sustainability Principles **10601129** **2 Credits**
This course provides students with an understanding of the principles of energy and sustainability as they relate to HVAC systems. Students will learn about the different types of building envelopes, such as walls, roofs, and windows, and how they impact energy efficiency and sustainability in HVAC. In addition, the course will cover various standards and codes related to energy and sustainability in HVAC, including the Energy Policy Act (EPAct), the Leadership in Energy and Environmental Design (LEED) certification, and the Energy Star program.

Energy Management Capstone **10481114** **4 Credits**
This will be a cumulative application of the concepts of all technical skills and general knowledge obtained throughout the curriculum to a sponsored project. These projects will be either industry, community or municipality sponsored and will range from industrial, commercial or residential in nature. Students will perform complete design, analysis, specification, and commissioning of a variety of energy management systems, thermal systems, or other renewable and energy efficiency systems. A final project report will be presented to the sponsor, community forum and the advisory board.

Energy Modeling 1 **10481105** **3 Credits**
This course will teach the student how to use Manual J from ACCA, REScheck, and REMrate. Students will develop the skills to do residential heating and cooling heat loads. Students will calculate heat loss and also losses or gains due to infiltration, sun loads and internal gains. Additionally, the students will begin to investigate energy consumption associated with lighting, appliances and plug loads.

Energy Modeling 2 **10481108** **3 Credits**
Students will explore in depth heat loss estimation, energy simulation, and energy optimization. They will also study building durability as it relates to residential and commercial projects. The software used to perform analysis will include: WUFI, THERM, REMrate, BEopt, and eQUEST.

Energy Storage Solutions **10660164** **3 Credits**
This course will cover energy storage from renewable energy sources allowing continuous energy production from an intermittent supply. Students will investigate current and emerging battery technology storage options along with capacitor storage solutions. Other types of energy storage will also be discusses such as compressed air, pumped water storage, flywheel storage as well as any new or emerging technologies as they become available.

Engine Performance 1 **32404334** **3 Credits**
Provides skills and technical knowledge in the use of diagnostic equipment, as well as emissions control devices. Includes computerized engine control systems, input sensors, output devices and exhaust system service.

Engine Performance 2 **32404362** **3 Credits**
Develop skills to analyze fault codes and diagnosis in air induction (turbos and superchargers), ignition, fuel injection and light duty diesel systems that affect vehicle performance. Includes advanced testing techniques using chassis dynamometer.

Engine Repair **32404353** **3 Credits**
Provides skills and technical knowledge in engine repair and maintenance under actual garage conditions. Includes diagnosis and repair of engine malfunctions, estimation of repair costs and parts ordering.

Engineering Software **10663100** **2 Credits**
This course introduces software programming languages, engineering software tools, and software programming concepts. Students will gain a rudimentary understanding of text-based, structured programming languages by learning the fundamentals of the C-programming language. They will also be introduced to graphical programming and other engineering software tools.

English 1 **20801201** **3 Credits**
English 1 is designed to help students use the writing process to strengthen and refine their writing skills. Students will use critical reading, thinking, and research skills to produce writing that illustrates their ability to effectively analyze information, synthesize information from sources, and ultimately, produce polished prose suitable for various purposes and audiences. This class assumes competence in English grammar and paragraph structure.

English 2 **20801203** **3 Credits**
English 2 continues the study of expository writing for students who wish to attain advanced skills in managing the written language. Students learn critical reading and thinking skills, including textual analysis and evaluations.

English Composition 1 **10801136** **3 Credits**
This course is designed for learners to develop knowledge and skills in all aspects of the writing process. Planning, organizing, writing, editing and revising are applied through a variety of activities. Students will analyze audience and purpose, use elements of research, and format documents using standard guidelines. Individuals will develop critical reading skills through analysis of various written documents.

Entrepreneurship Business Canvas **10102122** **3 Credits**
Learn the key tools and steps to build a successful startup (or at least reduce the risk of failure). An introduction to the basics of using a Customer Development Process, where entrepreneurs get out of the building to gather massive amounts of customer and marketplace feedback, and then use that feedback to create a business canvas. You'll learn the key steps of the Customer Development process: how to identify and engage the first customers for your product, and how to gather, evaluate and use their feedback to make your product, marketing and business model stronger.

Entrepreneurship Exploration and Mindset **10102108** **3 Credits**
Students will investigate, understand, and apply components of entrepreneurship enterprises to discover how these components fit together in successful businesses. Students will engage in the fundamental aspects of entrepreneurship- mindset, skills & behaviors of successful entrepreneurs. This course is designed to research and apply concepts in customer segmentation, business analysis, organizational structure, and competitive analysis through concept development. The course explores business concepts by focusing on the entrepreneurial opportunities within an organization and outside.

Entrepreneurship for Designers **10304138** **2 Credits**
Students will explore the skills, attitudes and behaviors of successful entrepreneurs and have the opportunity to meet and network with current leaders. Emphasis on design business documentation and planning, including: proposals, cost estimating, fees, bidding/negotiation, and construction administration. The National Council for Interior Design Qualification examination and subsequent state licensure paths are discussed.

Environmental Interactions Updates **10090329** **1 Credits**
This course will provide updates to variety of environmental issues related to agriculture and suggested ways in which to address the issues. Students must be actively engaged in production agriculture to enroll in this course.

Environmental Interactions-Ag **30090325** **3 Credits**
This course will examine a variety of environmental issues related to agriculture and suggested ways in which to address the issues. Students must be actively engaged in production agriculture to enroll in this course.

Environmental Issues **20806280** **4 Credits**
Environmental Issues is an introductory (non-laboratory) survey course entirely appropriate for first-year students. Environmental Issues explores diverse problems of human impact on natural systems. Though fundamentally grounded on the basic principles of biology and ecology, this course is designed to encourage interdisciplinary thinking about critical environmental problems. Students explore chemical, biological, political and ethical interactions of environmental systems on scales that range from local to international. The course prepares students for Principles of Ecology and other more advanced courses in Environmental Studies.

Estimating Bids & Specs **31410338** **1 Credits**
This course studies the process of preparing a bid for various work to be performed in the constructional trade. Students will learn to take off information from plans and specifications to prepare materials estimates. Students will estimate labor costs based on industry averages for labor rates. Given the plans and specifications for multiple projects that may include: additions, remodels, new residential construction, agricultural buildings, and commercial construction, students will prepare a bid.

Ethics in Criminal Justice **10504851** **2 Credits**
This course provides an exploration of ethical issues of police, courts, and corrections. It emphasizes consequences of decision making and the ethical decision-making models required for good judgment by justice guardians.

Ethnic Literature **20801212** **3 Credits**
Explores questions of identity within various cultural contexts. Writers represent one or more ethnic groups working in one or more genres of literature with emphasis on developments in voice, genre, and style over chronological periods and geographical zones. Individual sections may vary in particular emphasis.

Exploring Business Technologies **10106186** **2 Credits**
Using a personal information management software, students will create and manage e-mail messages, calendars, contacts, and tasks, along with how to perform basic customizations of the software. Students will also learn how to publish, edit, modify, organized, delete, and maintain content on web pages using a content management system.

Exploring Surgical Issues **10512127** **2 Credits**
Explores a variety of issues related to surgical technology. Emphasis is placed on becoming a professional member of the surgical team.

Exterior Finishes **31410371** **4 Credits**
In this course, students will complete the exterior finishing aspects of a residential structure. Tasks may include window installation, soffit and fascia installation, exterior trim installation, siding installation, and deck construction and finish. Students will perform these finishing operations by completing the exterior finish work for a newly constructed home.

Exterior Trim **31410368** **3 Credits**
In this course, students will complete the exterior finishing aspects of a residential structure to include: soffit and fascia installation, composite trim installation, siding installation, and deck construction and finish. Students will perform these finishing operations by completing the exterior trim work for a house on site.

Fabrication Welding 1 **31457310** **2 Credits**
A course of instruction to include the use of rulers/scales, layout and hand tools, power tools and large shop equipment, welding joint designs, and assembly projects by various welding processes.

Fabrication Welding 2 **31457320** **2 Credits**
A course of instruction to include introducing the CNC cutting table and press brake. It continues advancing techniques, tools, and equipment from Fabrication 1. Introduces weldment design considerations. Assemble projects by various welding processes with the use of blueprint symbols.

Fabrication Welding 3 **31457330** **2 Credits**
Introduces factors for working with non-steel materials. Primarily a capstone course allowing students to fabricate their own projects assembled using welding procedures the student develops.

Family Law **10110106** **3 Credits**
The Family Law course is designed to familiarize paralegal students with the basic legal concepts involved in the area of family relations and domestic relations law. The students will be able to compare how relationships and relationship issues are governed by the law including marital relationships, dissolutions, custody actions, child support actions, adoptions, paternity actions, and domestic violence relationships.

Farm Commodities Mktg **30090335** **3 Credits**
This course provides the student with the opportunity to use the various marketing methods and tools. Students must be actively engaged in production agriculture to enroll in this course.

Farm Records & Analysis **30090343** **3 Credits**
Emphasizes the practical use of a farm record system in managing the farm through farm and financial analysis. It includes the establishment of farm business goals, selection and use of farm credit, farm business arrangements, farm estate planning, and farm income taxes. Instruction on the use of business performance reports (cash flows, balance sheets, farm financial ratios, income over feed costs, Schedule F- profit and loss statement, cost of production) is included. Students will also learn to compare marketing and risk management strategies for various commodities and to evaluate farms using farm economic benchmarks.

Field Study 1 - Human Services **10520115** **3 Credits**
Learners practice human service skills and professionalism while gaining on-the-job experience through placements local human service agencies. They examine progress towards learning goals through reflection, discussion, and supervision. Documentation processes will be outlined and explored within the field setting. Learners discuss their experiences, challenges, ethics, and boundary issues during the weekly seminar and prepare for Human Services Field Study 2.

Field Study 2 - Human Services **10520123** **3 Credits**
Students demonstrate advanced skills and techniques used in the field. Students examine their progress toward learning goals through reflection, discussion, and Supervision. Students discuss their experiences, challenges, ethics, and boundary issues during the weekly seminar.

Finance Professionalism **10114112** **3 Credits**
Students develop skills to enhance their success in college and their finance careers. These skills include: professionalism, goal setting, self-assessment, time management, career exploration, team building, problem solving, communication skills, PowerPoint use and presentation skills. The course also includes an introduction to the program outcomes, program course competencies and how these course competencies align with the program outcomes.

Financial Customer Service & Sales **10114125** **3 Credits**
In this class, you will explore different products offered by the financial industry. You will gain skills to build relationships and create a positive customer experience. You will also gain communication, selling and customer service skills.

Fire Behavior and Combustion **10503195** **3 Credits**
This course explores the theories and fundamentals of how and why fires start, spread, and are controlled.

Fire Department Internship **10503131** **2 Credits**
This course allows second-year program students to actively participate as a "working" member of a fire department. Students work the 24-hour shift schedule at one of the local fire departments (excluding class times), and perform the same duties as the firefighters. Evaluation is determined by fire department officials and the course instructor. Prerequisite also includes a successful completion of a physical exam and a physical agility test.

Fire Fighting Principles **10503142** **4 Credits**
Describes basic fire behavior, techniques used to control structural and related fire emergencies, and life safety practices. Students perform all practical evolutions necessary to control and extinguish fires and otherwise meet all requirements for Firefighter I certification with the State of Wisconsin.

Fire Prevention **10503151** **4 Credits**
Provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, and identification and correction of fire hazards. Meets all requirements for Fire Inspector 1 certification with the State of Wisconsin.

Fire Protection Hydraulics **10503194** **3 Credits**
This course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems.

Fire Protection Internship **10503130** **3 Credits**
This course allows second-year program students to actively participate as a working member of a fire department. Students work the 24-hour shift schedule at one of the local fire departments (excluding class times), and perform the same duties as the firefighters. Evaluation is determined by fire department officials and the course instructor. Prerequisite also includes a successful completion of a physical exam and a physical agility test.

Fire Protection Systems **10503193** **3 Credits**
This course provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers.

Firefighter Agility Assessment **10503136** **1 Credits**
An introduction to fitness and wellness assessments that are used for entry into a career in public safety. Fire protection students will assess their level of fitness and wellness and develop a plan to achieve satisfactory fitness assessment levels. Students will participate in exercise labs that will prepare them to meet the Firefighter Agility Assessment minimum score.

Firefighter Fitness 1 **10807121** **1 Credits**
An introduction to fitness and wellness that provides guidelines for enhancing health and physical fitness in relation to a career in public safety. Fire protection students will assess their level of fitness and wellness and develop a prescription for behavior medication toward a healthier lifestyle. Students will prepare for the physical challenges involved in a fire safety career. Students will participate in exercise labs that will prepare them for the physical rigors of a career in the fire areas.

Firefighter Fitness 2 **10807122** **1 Credits**
An introduction to fitness and wellness that provides guidelines for enhancing health and physical fitness in relation to a career in public safety. Fire protection students will assess their level of fitness and wellness and develop a prescription for behavior medication toward a healthier lifestyle. Students will prepare for the physical challenges involved in a fire safety career. Students will participate in exercise labs that will prepare them for the physical rigors of a career in the fire areas. This is a continuation for Firefighter Fitness 1.

Firefighter Fitness 3 **10807123** **1 Credits**
An introduction to fitness and wellness that provides guidelines for enhancing health and physical fitness in relation to a career in public safety. Fire protection students will assess their level of fitness and wellness and develop a prescription for behavior medication toward a healthier lifestyle. Students will prepare for the physical challenges involved in a fire safety career. Students will participate in exercise labs that will prepare them for the physical rigors of a career in the fire areas. This is a continuation for Firefighter Fitness 2.

Firefighter Fitness 4 **10807124** **1 Credits**
An introduction to fitness and wellness that provides guidelines for enhancing health and physical fitness in relation to a career in public safety. Fire protection students will assess their level of fitness and wellness and develop a prescription for behavior medication toward a healthier lifestyle. Students will prepare for the physical challenges involved in a fire safety career. Students will participate in exercise labs that will prepare them for the physical rigors of a career in the fire areas. This is a continuation for Firefighter Fitness 3.

Firefighter II **10503110** **3 Credits**
This course continues the Firefighting 1 student's education into basic fire behavior, techniques used to control structural and related fire emergencies, and life safety practices. Students perform all practical evolutions necessary to control and extinguish fires and otherwise meet all requirements for Firefighter 2 certification with the state of Wisconsin and compliance with the requirements of National Fire Protection Association (NFPA) 1001. This is the second part of a two part course containing the coursework preparing the student to be a Basic Fire Fighter according to NFPA 1001 Standard for Firefighter Professional Qualifications and in accordance with ILHR 30, WI Statutes.

Fitness & Wellness for Public Safety **10807115** **2 Credits**
An introduction to fitness and wellness that provides guidelines for enhancing health and physical fitness in relation to a career in public safety. Participants will assess his/her own levels of fitness and wellness and develop a prescription for behavior modification toward a healthier lifestyle. Learners will participate in exercise labs that will prepare them for the physical rigors of a career in the fire areas. In lecture, learners will discuss contemporary, personal health issues that relate to wellness and fitness in public safety.

Fitness Fundamentals **20807200** **1 Credits**
This course is designed to provide students with the basic information and skills needed to begin a personalized exercise program and maintain a healthy and active lifestyle. Students will participate in both pre/post testing including the five components of fitness (muscular strength, muscular endurance, cardiorespiratory endurance, flexibility, and body composition). Throughout the course, students participate in a fitness program involving elements of cardiorespiratory endurance, strength, and flexibility.

Floor Care **30519326** **2 Credits**
Prepares students for custodial services employment. Introduces floor types, floor care chemicals and equipment. Develops knowledge and experience in assessment of current floor care needs and performance of floor care maintenance techniques (including routine, interim and restorative).

Fluid Power Fund **10620112** **2 Credits**
An introductory course dealing with theory, operation, and application of industrial hydraulic and pneumatic systems. Emphasis is placed on component and system operation using practical lab applications. Maintenance, troubleshooting, and electrical control of fluid power are also included. This course will also introduce centrifugal pump systems and characteristics along with troubleshooting of common pump systems.

Foundations of HIM **10530162** **3 Credits**
Introduces learners to the healthcare delivery system, and the external forces that influence healthcare delivery. Sets an understanding for the expectations and standards related to professional ethics, confidentiality and security of health information. Differentiates the use and structure of healthcare data elements, data standards, and the relationships between them. Prepares learners to collect and maintain health data to ensure a complete and accurate health record.

Foundations of Video Production **10701101** **3 Credits**
This hands-on course covers the basics of video production. Students will be introduced to enhanced studio and field production techniques. While utilizing media project management skills, students can expect to shoot, effectively light, record audio, and edit for video projects that will range in length from 30 seconds to a few minutes. Green screen production workflow will be covered, as will color correction and other asset management skills, alongside emerging media technologies. Students will also participate in media career and industry trends exploration alongside their video projects and assignments. A camera is required for this course.

Framing 1 **31410331** **2 Credits**
Students will be introduced to portable power tools, various hand tools, and measuring and layout procedures. Materials, methods, and procedures required to frame floor systems and walls will be studied.

Framing 2 **31410332** **2 Credits**
This course introduces the theory, code requirements, materials, methods, and procedures, required to hand-frame roof systems and construct staircases. Students will construct gable, hip, and intersecting roofs. Students will calculate, lay-out, and construct a code compliant staircase.

Framing Techniques **31410333** **5 Credits**
This course introduces the theory, materials, methods, and procedures used to construct floor, wall, roof systems, and staircases for wood-framed structures. Students will build a full-size structure in the framing lab using the proper tools, layout techniques, and appropriate materials.

Fund Of Elecs&Fabrication **10605138** **2 Credits**
Fundamentals of Electronics and Fabrication will introduce the student to basic AC and DC circuit theory, semiconductors, switches and relays, digital logic gates, circuit simulation software and test equipment. The course allows the student to learn by incorporating the electronics theory with the hands on fabrication of an electronics project.

Fundamental Electrical Skills **10620105** **1 Credits**
This course will introduce fundamental electrical skills. Proper wiring practices and an introduction to residential wiring systems will be included. Soldering and desoldering of wires and component connections will also be addressed.

Fundamentals of Machining **10420201** **1 Credits**
Requires the learner to apply safety requirements in the machining environment, identify the principles of machining theory, and operate basic machining equipment. Students are encouraged to take this course concurrently with Blueprint Reading and Measurement and Inspection.

Fundamentals of Plant Identification **10001101** **2 Credits**
Dive into the intricate world of plants with this comprehensive course on identification and taxonomy. Learn ethical specimen collection, explore the depths of taxonomical hierarchies, and master the art of classifying diverse plant families. Engage in hands-on workshops, interactive case studies, and practical demonstrations to sharpen your skills. From understanding environmental correlations to critiquing identification tools, this course offers a holistic approach to the botanical realm. Ideal for budding botanists and plant enthusiasts alike, embark on a journey to truly understand and appreciate the world of plants.

Fundamentals of Woodworking **31409311** **2 Credits**
This course introduces students to stationary and portable woodworking equipment operations and safety, measuring and layout methods, the lumber milling process, joinery used in woodworking, gluing and clamping processes, and general shop safety and operations.

GD&T in Machining **10420219** **1 Credits**
Requires the learner to recognize and interpret geometric dimensioning and tolerances (GD&T) symbols and apply the information to prints for manufacture of parts.

Game Development **10152105** **2 Credits**
Introduces the learner to two-dimensional gaming and animation. Topics include further study in Java, inheritance, threads and exception handling. Gaming concepts include chase games, imaging, audio, sprite graphics and tile games.

Gen Anatomy & Physiology **10806177** **4 Credits**
Examines basic concepts of human A & P as they relate to health sciences.Using a body systems approach, the course emphasizes the interrelationships between structure and function at the gross & 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 A & P to informed decision-making & professional communication with colleagues & patients. (This course also provides the foundation, and is a prerequisite to Advanced Anatomy and Physiology).

Gender and Crime **10504863** **3 Credits**
This course provides an examination of the nature and extent of diverse genders as offenders, as victims and as employees within criminal justice. It explores theories of offending to career development.

General Biology **20806234** **4 Credits**
The course examines fundamental principles of biology including cell structure and function, energy production by cells and ecosystems, reproduction and genetics, evolution, ecology and a survey of biodiversity. The class emphasizes application of the scientific method to problem-solving. The course is designed to provide a solid foundation for advanced courses in biology as well as providing scientific literacy for all students.

General Chemistry **10806134** **4 Credits**
Covers the fundamentals of chemistry. Topics include the metric system, problem-solving, periodic relationships, chemical reactions, chemical equilibrium, properties of water; acids, bases, and salts; and gas laws.

General Physics 1 **10806154** **4 Credits**
Presents the applications and theory of basic physics principles. This course emphasizes problem-solving, laboratory investigation, and applications. Topics include unit conversion and analysis, vectors, translational and rotational kinematics, translational and rotational dynamics, heat and temperature, and harmonic motion and waves.

General Psychology **20809231** **3 Credits**
Study of individual and social behavior including its psychological and physiological bases, development, motivation, emotion, perception, learning and behavior disorders. This course is a prerequisite for several college transfer courses in psychology.

Geometric Dim & Tolerance **10606165** **3 Credits**
This course is designed to introduce the student to the fundamentals of Geometric Dimensioning and Tolerancing (GDT). Emphasis will be placed on how GDT controls proper fit and function between mating parts within an assembly from design to manufacturing through inspection. Terminology, rules and the geometric symbols will be covered. We will be using the coordinate measuring machine and related software to emphasize the GDT concepts by measuring dimension accuracy and geometric controls.

Geriatric Practice **10514178** **3 Credits**
Examines the role of the Occupational Therapist (OT) in the service delivery to elders in a variety of settings. Includes analysis of the impact of age- related changes and disease processes on the function of the elderly.

Global E-Commerce **10102123** **3 Credits**
Provides an introduction to eCommerce. Students will explore, the fundamentals of e-commerce, identifying the difference between traditional and eCommerce businesses and how the rapidly changing technological environment impacts both. Students will develop a heightened awareness of emerging technologies and trends in e-business. Fundaments of global business will be discussed in an effort to understand how the environment, cultures, and political systems impact the global trade arena. Learners will examine competencies related to technology, privacy and security issues, electronic payments, and ethical issues that arise.

Graphic Design & Marketing **10201136** **3 Credits**
This comprehensive design course introduces students to the basic principles of marketing and how they relate to graphic design. Positioning, branding, and consumer behavior are major focuses of the course. Students gain experience designing marketing, advertising and promotional materials for a variety of products and services. This course will also emphasize innovative graphic problem solving and creative visual communication.

Graphic Design Portfolio **10201149** **3 Credits**
Three important factors for obtaining employment in the graphics industry are explored in this course: the resume, the interview, and the presentation of artwork. Topics covered, when presented from a graphic design perspective, prepare students for their job search. Students assemble a portfolio, engage in mock interviews, and participate in a Portfolio Review. Guest speakers describe career opportunities and expectations. This course is reserved for students in their 4th term.

Graphic Design-Advertising **10201145** **3 Credits**
This course is designed so you will gain a comprehensive understanding of the designer's role and advertising's role in society. You'll also refine your technical expertise and increase your design skills. You'll fully implement the design process and principles while designing a number of portfolio quality pieces for actual real life clients.

Graphic Presentation **10304109** **2 Credits**
The course provides an exploration of graphic communication principles and practices with a particular focus on leveraging the capabilities of Adobe InDesign, a leading software used in the industry. Through hands-on products and guided instruction, students will be able to create visually compelling designs, effectively convey messages through layout and typography, and produce professional-level publications and marketing materials.

Green Cleaning **30519328** **1 Credits**
Prepares students for custodial service employment. Introduces students to effective cleaning techniques and chemicals used to protect the public health without harming the environment.

Greenhouse Crop Production **10001150** **2 Credits**
Dive into the dynamic world of greenhouse production with this comprehensive course. Seamlessly merging scientific principles with hands-on applications, this curriculum delves into the nuances of greenhouse environmental controls, crop selection, and resource planning. Students will gain a deep understanding of the factors influencing crop growth, from the significance of frost-free dates to the intricacies of plant nutrition. Moreover, the course provides practical training in setting up greenhouse environments, ensuring optimal conditions for a diverse range of plant species. Embark on this enlightening journey and master the art and science of greenhouse production.

Greenhouse Fundamentals **10001124** **3 Credits**
Enter into the dynamic world of greenhouse operations with our comprehensive course, Greenhouse Fundamentals. From mastering advanced watering techniques to practicing eco-friendly cultural practices, this hands-on experience offers a blend of theory and practice. Explore sowing strategies, transplanting tactics, risk management, and tool utilization, all while drawing parallels between greenhouses and natural ecosystems. Whether you're a budding horticulturist or a seasoned plant enthusiast, this course promises a holistic understanding and the skills to lead in the horticultural realm. Join us and nurture your green thumb!

Greenhouse Management & Entrepreneurship **10001126 3 Credits**
This course is designed to provide students with the foundational knowledge and hands-on experience needed to establish and manage a successful retail greenhouse. The focus will be on producing high-quality vegetable garden starts, houseplants, ornamental, and native plants. Students will be trained in labeling crops, understanding their growing requirements, and effective marketing strategies. The course will culminate in a community-wide greenhouse plant sale fundraiser, allowing students to showcase their skills and knowledge.

Greenhouse Production **10001148** **3 Credits**
Cultural needs, equipment selection and operation, techniques and application of production will be emphasized on a nursery and fruit and vegetable operation. Students will be exposed to the requirements for labor, equipment, pest management, and cultural needs for the plants in these operations. Scheduling and budgeting will be explored.

Group Design and Facilitation **10520113** **3 Credits**
Students will learn about a variety of group types and when to apply each type. Students will also learn principles and techniques needed to design and lead psychoeducational groups in a variety of settings. Students will practice group facilitation skills and will learn how to navigate group dynamics when working with a variety of populations.

HIT Capstone **10530166** **1 Credits**
Prepares the student to enter the workforce. Topics may include resume and cover letter writing, interviewing skills, portfolio preparation, and RHIT examination preparation.

HR Capstone **10116115** **3 Credits**
This course provides Human Resource Management students the opportunity to integrate the knowledge they have obtained throughout their curriculum by demonstrating proficiency with the core functions of HR.

HR Essentials **10116105** **3 Credits**
HR Essentials provides the foundation for professionals to be successful in the field of human resources. The course provides insights into the critical strategic role HR plays in the workplace. It also outlines the HR practices and behaviors of effective HR professionals.

HR Info Management **10116188** **3 Credits**
Students learn to manage employee information throughout the employee lifecycle in an organization with the use of an HR management system. HR Analytics, meeting technologies, and artificial intelligence will also be explored.

HR Professionalism **10116118** **2 Credits**
Students will develop personal and learning skills that will enhance their success in the Human Resource Management program. These skills include self- assessment, time management, study skills, learning styles, active reading, communication skills and career development. Course competencies and sequencing are reviewed, as well as resources available. Students are also introduced to career opportunities in the field of human resources.

HR Stewardship **10116116** **3 Credits**
HR Stewardship ensures HR professionals possess business acumen and exemplify ethical behavior in representing the organization.¬† These responsibilities will be viewed through the lenses of environmental, social, and corporate governance; project planning and management; and meeting facilitation.

HTM Capstone Project **10605210** **3 Credits**
Students will select a medical device or research project and independently create an in-depth study of that device/topic. They will prepare documents to share to the public and make a professional presentation of their project for peer and professional review. Students will also prepare for a CBET (Certified Biomedical Equipment Technician) practice exam focusing on solidifying program knowledge base in electronics, codes/standards/safety practices, computers/networking, anatomy/physiology, medical equipment, communications, and HTM problem solving.

HVAC - Diesel **32412321** **2 Credits**
A practical study of the theories and maintenance procedures for the operation, preventive maintenance, failure diagnosis and repair of cab climate control systems. The EPA and industry required practices will be adhered to throughout the course.

HVAC for BSEM **10481117** **1 Credits**
Students will learn the basics of HVAC systems and how they affect the indoor environment. They will address appropriate equipment sizing, selection, and commissioning of systems to ensure comfort and indoor environmental quality.

HVACR Air Conditioning **10601125** **4 Credits**
This course covers the start up, check out, and operation of residential split system air conditioners, commercial roof top units, air source heat pumps, water source heat pumps, and geothermal heat pumps. Troubleshooting and refrigerant recovery will be emphasized. HVACR is a common reference to Heating, Ventilation, Air Conditioning and Refrigeration.

HVACR Air Hand, Psych & IAQ **10601102** **1 Credits**
Learners will size duct systems, select fans and use air balancing test instruments. The us of the psychrometric chart to calculate heat and humidity transfer into or out of air will also be introduced. Learners will study the purpose and means of continuous indoor air quality. HVACR is a common reference to Heating, Ventilation, Air Conditioning and Refrigeration.

HVACR Basic CAD **10601112** **2 Credits**
This is an introductory course in computer-aided drafting. Basic skills utilizing Auto CAD software will be emphasized. Course content includes: drawing setup, basic input procedures, drawing modifications and CAD concepts unique to producing drawings related to heating, ventilating and air conditioning. HVACR is a common reference to Heating, Ventilation, Air Conditioning and Refrigeration.

HVACR Commercial Refrig **10601122** **4 Credits**
This course covers the operation, control and maintenance of commercial ice makers, super market refrigeration, and special refrigeration applications. Refrigerant handling and recovery will be emphasized. HVACR is a common reference to Heating, Ventilation, Air Conditioning and Refrigeration.

HVACR Commercial Systems **10601140** **3 Credits**
This course studies the design, application, operation, and maintenance of large commercial air conditioning, refrigeration, and air handling systems. Coursework includes lab studies as well as field study trips to commercial installations. HVACR is a common reference to Heating, Ventilation, Air Conditioning and Refrigeration.

HVACR Electric Motors & Ctrls **10601116** **4 Credits**
This course covers basic electrical theory, parallel and series circuits, voltage, current, and resistance. Transformers, contactors, relays and solid state devices are studied. The types and characteristics of electric motors and controls commonly found in air conditioning and refrigeration applications are studied. This course covers the basic fundamentals of electricity including magnetism, resistance, inductance and capacitance. Learners will read electrical diagrams, interpret symbols , use test instruments and perform troubleshooting tasks. HVACR is a common reference to Heating, Ventilation, Air Conditioning and Refrigeration.

HVACR Energy **10601134** **2 Credits**
This course studies the interrelationship of a building, its occupants and the systems in the building. Topics include ventilation, moisture, renewable energy, sustainability, LEED design, and energy use in buildings. Learners will use building diagnostic procedures such as testing for duct leakage, infiltration, and backdrafting. HVACR is a common reference to Heating, Ventilation, Air Conditioning and Refrigeration.

HVACR Forced Air Htg **10601107** **4 Credits**
This course emphasizes the operation, maintenance, testing and repairing of residential furnaces. Gas and oil furnaces will be covered. The learner will use hand tools and test instruments. Topics include combustion, combustion safety, venting, filters, thermostats, heat transfer, gas piping, and carbon monoxide, circulation blowers, gas conversion, furnace components and function and typical location. HVACR is a common reference to Heating, Ventilation, Air Conditioning and Refrigeration.

HVACR Hydronic & Steam Systems **10601137** **4 Credits**
Participants will design hot water systems, select circulating pumps and balance hydronic systems. Components of the course include fluid flow in pipes, pump characteristics and steam systems. Operating boilers efficiently and safely will be emphasized. HVACR is a common reference to Heating, Ventilation, Air Conditioning and Refrigeration.

HVACR Intro to Installation **10601121** **3 Credits**
The learner will design and install forced air duct system with fabricate sheet metal box, a gas furnace, install a residential air conditioner, and install a gas boiler and the components of a boiler and in floor heating system. Learners will take the EPA Refrigeration Handling Certification test. HVACR is a common reference to Heating, Ventilation, Air Conditioning and Refrigeration.

HVACR Job Shadow **10601128** **1 Credits**
Through a combination of outside speakers and job shadowing, learners will be introduced to HVACR occuptional areas such as installing, servicing, testing, selling and designing. HVACR is a common reference to Heating, Ventilation, Air Conditioning and Refrigeration.

HVACR Refrigeration **10601101** **4 Credits**
This course is an introduction to basic refrigeration systems. Topics include terminology, the refrigeration cycle, safety, refrigerants, lubricants, and environmental issues. The learner will assemble copper tubing, use hand tools, and use test instruments. The learner will operate, evacuate, charge and repair basic refrigeration units. HVACR is a common reference to Heating, Ventilation, Air Conditioning and Refrigeration.

HVACR Res Htg & Cool Loads **10601108** **1 Credits**
This course covers human comfort and heat transfer. Learners will complete a heat loss and a heat gain calculation of a residence. HVACR is a common reference to Heating, Ventilation, Air Conditioning and Refrigeration.

HVACR System Design **10601145** **3 Credits**
Design and document air conditioning systems for commercial buildings. Design and document a refrigeration system for product storage. Computer programs will be used in component selection and system design. HVACR is a common reference to Heating, Ventilation, Air Conditioning and Refrigeration.

HVACR Systems Planning and Design **10601132** **3 Credits**
The course will cover various aspects of HVACR systems planning, including load calculations, duct design, piping design, and equipment selection. Students will learn how to size and select equipment based on building and environmental factors. Students will also study the principles of building codes and regulations as they relate to HVACR systems planning. They will learn about the different types of building codes and regulations, including the International Mechanical Code (IMC), the International Energy Conservation Code (IECC), and the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) guidelines.

HVACR Temperature Controls **10601142** **3 Credits**
This course will assist the student in developing the skills required to design, analyze, modify and calibrate HVAC (Heating, Ventilating and Air Conditioning) control systems. The fundamentals of control systems will be studied and applied to common control strategies most often found in commercial HVAC systems. HVACR is a common reference to Heating, Ventilation, Air Conditioning and Refrigeration.

Hazardous Materials Awareness & Ops **10503153** **1 Credits**
This course provides basic chemistry relating to the categories of hazardous materials including recognition, identification, reactivity, and health hazards encountered by emergency services.

Health Quality Management **10530161** **3 Credits**
Explores the programs and processes used to manage and improve healthcare quality. Addresses regulatory requirements as related to performance measurement, assessment, and improvement, required monitoring activities, risk management and patient safety, utilization management, and medical staff credentialing. Emphasizes the use of critical thinking and data analysis skills in the management and reporting of data.

Health, Safety & Welfare **10304157** **2 Credits**
This course provides an exploration of industry regulations, code assessment, universal design guidelines, and interior environmental sustainability. Students will calculate essential life safety elements, such as egress, fire separation, and plumbing requirements. The impact of interior design on the environment, including the use of natural resources, the production of waste, and the emission of pollutants is also covered. Lastly, the course provides students with an in-depth exploration of furniture and finish industry standards and the methodologies employed in testing them. At course end, students will demonstrate the necessary skills to ensure compliance, safety, and quality.

Health, Safety and Welfare for Design **10304137** **1 Credits**
A study of industry regulations, code assessment, universal/accessible design principles, and environmental sustainability attributes. Students will demonstrate an ability to understand and analyze life safety elements including egress, fire separation, and energy codes are ensued.

Healthcare Admin and Organization **10160132** **2 Credits**
Focuses on the administration and organization of health care delivery systems utilized in a variety of settings such as hospitals, clinics and nursing homes. Examines health care planning, regulations, political impact and major health care issues including law and ethics for the health professions. Includes brief discussion on health care systems in other industrialized countries and differences in health status and expenditures.

Healthcare Business Terminology **10160121** **2 Credits**
Students will learn the component parts of medical terms including prefixes, suffixes and root words. Students will practice formation, analysis and reconstruction of medical and business terminology.

Healthcare Law & Ethics **10530178** **2 Credits**
Examines regulations for the content, use, confidentiality, disclosure, and retention of health information. An overview of the legal system and ethical issues are addressed.

Healthcare Revenue Management **10530159** **3 Credits**
Prepares learners to compare and contrast health care payers, illsutrate the reimbursement cycle, and to comply with regulations related to fraud and abuse. Learners assign payment classifcations with entry level proficiency using computerized encoding and grouping software.

Healthcare Stats and Analytics **10530163** **3 Credits**
Explores the management of medical data for statistical purposes focusing on descriptive and inferential statistics including definition, collection, calculation and compilation of numerical data. Examines data analytics, retrieval, presentation and research methodologies.

Healthcare Syst & Tech Troubleshooting **10605201** **3 Credits**
This course covers medical devices and systems analysis and troubleshooting. Emphasis is placed on understanding, testing, and troubleshooting medical devices particularly in relation to their safe operation. Content includes tool skills, review of electronics, overview of mechanical systems, utilization of operators/service manuals, and operation of test equipment while working on medical devices.

Heat Pumps **10601124** **3 Credits**
This course provides students with a comprehensive understanding of heat pumps including air source, ground source, and water source heat pumps and their applications in HVAC systems. Students will learn about the principles of heat transfer, thermodynamics, and refrigeration as they relate to heat pump operation and efficiency. They will learn about the design and installation of heat pump systems, as well as the maintenance and troubleshooting of these systems. In addition, the course will cover environmental and regulatory issues related to heat pump technology, as well as the latest trends and innovations in heat pump design and technology.

Heating Systems **10601110** **3 Credits**
This course will provide a foundational knowledge of heating principles, equipment, and systems used in residential and commercial settings. The course content will include basic principles of heat transfer, types of heating systems, combustion processes, piping, practical shop safety, controls, and maintenance procedures. Particular emphasis will be placed on designing, installing, and maintaining heating systems that meet industry standards, local and national codes, environmental regulations, air filtration and customer demand. In addition to theoretical concepts, students will participate in lab sessions and hands-on activities that simulate real-world scenarios.

Help Desk Management **10154165** **3 Credits**
Students will analyze help desk management tools and evaluate techniques necessary to select help desk technologies. Students will also be exposed to how performance measures are used to evaluate the help desk operation. The help desk working environment, including the science of ergonomics, will be analyzed and discussed as it impacts an operational environment.

Herbaceous Plant Identification **10001115** **2 Credits**
Commonly used annual, bulb and perennial herbaceous plants are studied with an emphasis on their use in the landscape.

High Performance Buildings **10481107** **3 Credits**
Students will study topics related to high performance buildings, including: air tightness testing and verification, ventilation strategies, envelope assemblies, durability, moisture management, control layers, energy optimization, and high performance windows and doors. Students will also examine high performance building standards and programs such as LEED for Homes, GreenStar and Passive House.

History & Theory of Archi **10614102** **2 Credits**
This course allows architectural students to develop and awareness of architectural history and its impact on current design. The focus will be on architectural styles within the context of cultural expression. Instruction centers on influential buildings and architects throughout history and their impact locally and regionally.

History and Theory of Design **10304131** **1 Credits**
Instruction centers on influential designers and iconic architecture throughout history and their impacts on current design.

Holistic Plant Health Care **10001114** **2 Credits**
Embark on a captivating journey through the vibrant world of plant care. Tailored for aspiring horticulturists, this course provides a deep dive into the underlying causes of plant stress, blending sustainable techniques for managing pests and diseases with a focus on cultural and environmental factors. Delve into the delicate equilibrium between plant health and the environment. This holistic perspective will empower you to apply evidence-based care strategies, cultivating landscapes that flourish in natural harmony. By the end of this transformative course, you will stand as a skilled practitioner, ready to raise the bar in landscape horticulture through a sustainable, holistic lens.

Homeland Security **10504840** **3 Credits**
This course provides an examination of national and state security efforts necessary to protect against all threats foreign and domestic from terrorism to pandemic. It emphasizes a comprehensive strategic planning process and the national incident management system from surveillance to suppression.

Horticulture Career Readiness **10001147** **2 Credits**
Prepare for your transition from student to horticulture professional with an intensive exploration of key areas in this culminating course. You will dive deep into the intricacies of the industry, refining your mindset for the challenges that lie ahead. Through hands-on experiences and strategic workshops, you'll acquire the pivotal skills and insights needed for a seamless transition into the professional realm of landscape horticulture.

Hospitality Cost Control **10109131** **3 Credits**
Students will examine systems and controls required to efficiently operate a hospitality facility including product handling and inventory and labor control. Students will analyze operating costs and their relationship to different types of services.

Hospitality Event Management **10109108** **3 Credits**
This course focuses on preparing the learner to plan components of an effective event and meetings. Topics include meeting and event processes such as pre-planning activities, meeting and event resources, event location, audience needs, and safety and security concerns. Learners will explore budgets, infrastructure, and ADA compliance.

Hospitality Management Internship **10109150** **3 Credits**
This course is designed to give the student on-the-job work experience within the hospitality industry. The student will work with a business partner in a paid position. The instructor and employer will work to guide the student towards applying skills they've acquired from their academic work to the workplace. The student will complete academic hours related to the competencies of the course reflecting on their experiential learning. This work will provide resume and job seeking skills, develop a network of contacts, cultivating career readiness.

Hospitality Sales and Promotions **10109125** **3 Credits**
Students will explore sales, marketing and promotion in the hospitality industry. A variety of techniques to attract and retain customers will be examined. The student will also be introduced to product and service merchandising.

Hum Resource Internatl Issues **10116101** **2 Credits**
Each student researches the geography, demographics, and culture of various nations. Following the research, students will focus in international human resource practices, including recruiting staff, training, compensation, repatriation and performance management.

Human Biology **10806198** **4 Credits**
This is an introductory course that emphasizes the structure of the human body and the functional interrelationships of the body's systems. Consideration is also given to human genetics, human evolution, ecology, and the role that humans play in the environment.

Human Body in Health & Disease **31509302** **3 Credits**
Focuses on diseases that are frequently first diagnosed and treated in the medical office setting. Students learn to recognize human body anatomy and the causes, signs, and symptoms of diseases of the major body systems as well as the diagnostic procedures, usual treatment, prognosis and prevention of common diseases.

Human Diseases for Hlth Profes **10530182** **3 Credits**
Prepares learners to interpret clinical documentation that they will encounter in a variety of healthcare settings. Emphasis is placed on understanding the common disorders and diseases of each body system to include the etiology (cause), signs and symptoms, diagnostic tests, and results, and medical treatments and surgical procedures.

Human Resource Applications **10116152** **3 Credits**
Students further develop their human resource knowledge and skills by working with HR professionals to complete human resource projects for La Crosse-area organizations. Teams of students are provided actual problems or projects from local organizations. Evaluation of students' work will be heavily influenced by the satisfaction expressed by representatives of the organizations served.

Human Resource Info Mgmt **10116186** **2 Credits**
Students learn to use the integrated human resource information components of available software systems to perform human resource database tasks related to administration, performance management, compensation, recruitment, and more. In a series of exercises, students process the HR information related to groups of employees as these employees move through the application, selection, promotion, and retirement phases of employment.

Human Resource Management **10196193** **3 Credits**
Learners apply the skills necessary to value and apply employees' abilities and needs to organization goals. Learners apply the supervisor's role in human resource management, impacts of EEOC (Equal Employment Opportunity Commission), writing job descriptions, recruitment, selection, conducting job interviews, orientation, developing policies and procedures, training, performance management, employee counseling and development, and effective use of compensation and benefit strategies.

Human Resource Portfolio **10116147** **3 Credits**
Students apply their human resource knowledge to develop a portfolio that demonstrates their competence in key areas of human resources, including management, safety, training, staffing, compensation administration, and employment law. Local human resource professionals then review the portfolios to evaluate each student's expertise. Emphasis is placed on demonstrating HR knowledge through planning and professional writing.

Human Services Field Study 2 **10520122** **4 Credits**
Students demonstrate advanced skills and techniques used in the field. Students examine their progress toward learning goals through reflection, discussion, and Supervision. Students discuss their experiences, challenges, ethics, and boundary issues during the weekly seminar.

Human-Centered Design **10304124** **1 Credits**
In this course, students will embark on an immersive journey of empathetic human-centered problem-solving. The course explores the profound connection between individuals and their contextual environments, delving into social, psychological, cultural, and global factors. By understanding these dynamics, designers can craft-built environments that resonate with and cater to the unique needs of their clients. Leveraging lectures, case studies and readings students will cultivate the ability to truly immerse themselves in the experiences of others, enabling them to effectively address the challenges they encounter.

Hydronic and Steam Systems **10601118** **3 Credits**
The course will cover various types of hydronic and steam systems commonly used in HVAC, including hot water boilers, steam boilers, radiant heating systems, and chilled water systems. Students will learn about the components of these systems, including boilers, pumps, pipes, valves, and controls, as well as the design and installation considerations for each type of system. Students will also study the principles of hydronic and steam system performance, including efficiency, capacity, and control. Select appropriate HVAC equipment, and design hydronic and steam systems as well as how to diagnose and troubleshoot common problems in hydronic and steam systems.

ICD Diagnosis Coding **10530197** **3 Credits**
Prepares students to assign ICD diagnosis codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD diagnosis codes to case studies and actual medical record documentation.

ICD Procedure Coding **10530199** **2 Credits**
Prepares students to assign ICD procedure codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD procedure codes to case studies and actual medical record documentation.

INDS Construction Documentation **10304168** **3 Credits**
In this comprehensive course, students will discover the key elements of commercial project documentation practices and delve into technical drawing techniques for creating floor plans, elevations, sections, schedules, and specifications. With a strong focus on effectively communicating design intent and its role in project coordination, this course emphasizes the importance of organizing information to meet professional standards.

INDS Studio 1 - Intro to Res Design **10304113** **2 Credits**
In this introductory studio course, students explore residential client preferences, studying space planning, furniture arrangement, kitchen and bath design, and orthographic projection. These aspects create harmonious environments, forming the foundation for subsequent design studios. Throughout the studio series, students engage in real-world design challenges, collaborative projects, charettes, and critiques. This fosters effective communication techniques for presenting concepts and ideas, along with providing authentic feedback. Studio courses provide the backdrop for a robust design portfolio showcasing their abilities and knowledge.

INDS Studio 2 - Advanced Res Design **10304123** **3 Credits**
Through analysis, synthesis, and practical application, students build upon Studio 1 by implementing client preferences into innovative solutions. With a focus on the design process, this studio guides student's initial experience from schematic ideation to final presentations. Throughout the Studio series, students engage in projects, charettes and critiques which foster effective communication and ideas, all while developing a robust design portfolio showcasing their abilities and knowledge.

INDS Studio 3 - Intro to Comm Design **10304153** **2 Credits**
In this mid-level studio course, students explore diverse public spaces, from healthcare facilities to offices and retail centers, delving into the complexities of large-scale facility design. The curriculum includes crucial aspects of budgets, contracts, and furniture procurement. Throughout the Studio series, students engage in projects, charettes and critiques which foster effective communication and ideas, all while developing a robust design portfolio showcasing their abilities and knowledge.

INDS Studio 4 - Adv Commercial Design **10304163** **3 Credits**
This course focuses on designing high-performance workplaces aligned with organizational goals. Students explore how a client's work environment impacts growth, learning, and well-being. Addressing constraints, they develop a comprehensive understanding to create functional workspaces promoting productivity, collaboration, and well-being. Throughout the Studio series, students engage in projects, charettes and critiques which foster effective communication and ideas, all while developing a robust design portfolio showcasing their abilities and knowledge.

INDS Studio 5 - Capstone Prep **10304173** **2 Credits**
In the Preparatory Course, students research their preferred industry and project sector, learn to identify client's needs, and establish project scopes, timelines, and constraints. Under faculty guidance, they navigate substantive projects, exercising agency. This course lays a strong foundation for their Capstone Design journey. Throughout the Studio series, students engage in projects, charettes and critiques which foster effective communication and ideas, all while developing a robust design portfolio showcasing their abilities and knowledge.

INDS Studio 6 - Capstone **10304183** **3 Credits**
This pinnacle Studio course offers a platform for the advanced application of design practices guided by students and mentored by faculty. Students build upon accumulated knowledge to showcase abilities in holistic design solutions. The course encompasses industry standards in sustainability, functionality, aesthetics, and human experience. Students provide project management by defining project scope, displaying effective time management, conducting thorough research, creating construction documentation, and preparing final design presentations for stakeholders and Annual Student Showcase participants.

IT Dev Ops **10152150** **3 Credits**
This course is an introduction to fundamental processes and procedures used in software development and system operations. Topics covered will include Git version control, basic Linux usage and administration, web server and database fundamentals, docker usage and administration including networking and storage, and cloud deployments to Amazon Web Services.

IT Exploration **10154103** **3 Credits**
Students explore the Information Technology (IT) field and the various career options available to them. Customer service skills, ethics in the computer industry, servant leadership, teamwork, time management, and stress management will be covered. This course is where the student will begin to design and create their program portfolio.

IT Field Study **10154180** **1 Credits**
Provides the student with job search and career readiness skills to prepare for an internship, unpaid externship or service learning project.

IT Hardware/Software Fund **10150101** **3 Credits**
Participants will install, configure, and troubleshoot computer components in a Microsoft Windows operating system environment in support of learning about power supplies, motherboards, fixed/removable media, volatile memory, graphics cards and uninterruptable power supplies. A variety of software, virtual devices, and cybersecurity methods will be covered such as RAID, storage spaces, preboot execution environments, hypervisors/virtualization, file/volume encryption, and media recovery/sanitization. Portable computing, local/network print protocols, Linux and macOS operating system fundamentals- including helpdesk software and essential information security practices will also be explored.

IT Internship **10154175** **1 Credits**
Provides the student with practical on-the-job experience working in the computer information systems field. Students enrolled in this course may have either a paid position, unpaid field study or service learning project. Evaluation of the students performance will be a cooperative effort between the business site and the instructor.

IT Project Analysis **10154178** **3 Credits**
Students will examine typical tasks of many personal and office computer installations. The student will learn about site preparation as well as the tools and steps necessary for project management and installation of operating systems and application software. Students will be required to complete and present a final project in which they will select, install, setup, test, and demo software.

IT Project Management **10152133** **3 Credits**
This course covers project management from proposal through completion. Topics include planning, resource management, and time tracking. Students will critically evaluate project requirements, risks, and feasibility, while also engaging in real-world case studies and on-site visits to deepen their understanding of project dynamics, stakeholder interactions, and effective problem-solving strategies. These skills will be used to complete a service-learning project for the community. Students will work to hone their portfolio and search for career openings in the local area.

IT Systems Support **10154137** **3 Credits**
In this course communication, research, and problem-solving strategies are developed. ITIL framework is introduced and various methods of support are explored. Students utilize support software for tracking, logging, and escalating of calls. Customer service techniques along with critical thinking skills are applied to resolve incidents. Students will apply knowledge gained in a student-run help desk environment.

Illustration Concepts **10201128** **3 Credits**
Students will gain experience with communicating messages, ideas and content through the use of illustration. Projects will be based on various real-life industry assignments and commissions.?Students will use both analog and digital illustration tools, and combinations of these mediums.?

Imaging Equipment Operation **10526194** **3 Credits**
Introduces radiography students to the principles and application of x-ray technology. Students analyze how x-rays are produced and determine the corrective actions necessary for common equipment malfunction.

Imaging Modalities **10526231** **2 Credits**
Introduces radiography students to imaging modalities with an emphasis in computed tomography and cross-sectional anatomy.

Imaging Systems Modalities **10605214** **2 Credits**
This course provides an overview of medical imaging modality systems with emphasis on application, safety, and basic theory of operation. The basic theory of operation, safety concerns, and typical applications are investigated for modalities including: Ultrasound, CT, MRI, Nuclear Medicine, Radiation Oncology, and some additional modalities. If available, a portion of the course labs will take place in a regional medical center. Introductory ideas related to preventative maintenance and repair are also discussed.

Imaging Systems X-Ray **10605213** **2 Credits**
This course provides an overview of medical X-Ray imaging systems with emphasis on components, and circuits. The basic theory of operation, safety concerns, and typical applications are investigated for: X-Ray, Mammography, Mobil radiography, and Fluoroscopy. If available, a portion of the course labs will take place in a regional medical center. Introductory ideas related to preventative maintenance and repair are also discussed.

Inbound Marketing **10104140** **3 Credits**
Inbound Marketing covers strategies marketers use to attract consumers to a business website and keep them returning. The course focuses on developing and distributing content appropriate for buyer's journey, understanding behaviors and segmentation, utilizing automation and artificial intelligence.

Income Tax Accounting **10101165** **4 Credits**
Introductory course emphasizing the preparation of individual and small business income tax. Students will learn how to apply filing statuses; exemptions; inclusions and exclusions from gross income; adjusted gross income; treatment of retirement plans; small business expenses; self-employment expenses; capital gains and losses; tax credits; special taxes; depreciation for tax reporting; accounting periods; and withholding methods and payments.

Industrial Control Systems **10605200** **4 Credits**
This course covers fundamental wiring concepts, relay ladder logic, sensors, timers, motor fundamentals, motor starters and Variable Frequency Drives. It also includes an introduction to PLC hardware/programming along with Touch Screen/HMI applications.

Industrial Controls Applications **10620127** **2 Credits**
This course covers fundamental wiring concepts, relay ladder logic, sensors, timers, motor fundamentals, motor starters and Variable Frequency Drives.

Industrial Controls Programming **10620131** **2 Credits**
Introduction to PLC hardware/programming along with Touch Screen/HMI applications.

Industrial Electricity **10620103** **2 Credits**
This course covers fundamental DC and AC electricity concepts as applied to industrial control systems. Electrical quantities, measurements and circuit characteristics/configurations will be introduced. DC and Single-Phase AC will be addressed along with transformers. Proper wiring practices and an introduction to residential wiring systems will be included. Soldering and de-soldering of wires and component connections will also be addressed.

Industrial Electronic Devices **10660123** **2 Credits**
This course provides an introduction to semiconductor principles and operation including testing and troubleshooting. Diode types, characteristics, operation, testing and troubleshooting are investigated. Diode applications including rectification and DC power supplies are covered along with Zener diodes and packaged linear regulators. The transistor is introduced as a switch and basic biasing is presented. Basic power field effect transistor function is introduced. Power control components are introduced, including the SCR, Triac, solid state relays and insulated gate bipolar transistors.

Industrial Electronics **10620143** **2 Credits**
This course covers advanced AC concepts as well as an introduction to semiconductor principles and operation as applied to industrial control systems. The course will include transformers, inductance, capacitance, diodes, regulators, switching transistors, SCRs, Triacs, and the IGBT.

Industrial Networking **10620141** **2 Credits**
In the Industrial Networking course students will be introduced to many different industrial networks. The course will start with the physical layer issues and methodologies of hardware installation for their proper operation. We then move on to low level remote I/O networks, their structure and physical makeup. The class will then advance to higher level industrial networks. These networks make up the communication backbones of most industrial equipment. Finally we explore Ethernet protocols. Basic operation and troubleshooting of computers will also be incorporated.

Industrial Networking Applications **10620142** **1 Credits**
Industrial Networking Applications will reinforce knowledge obtained in previous courses in terms of automation device communication. These devices include Computers, PLC's VFD's, and HMI's. Industrial networks make up the communication backbones of most industrial equipment. Networking equipment such as managed/unmanaged switches, servers, and routers will also be explored.

Information Systems-Accounting **10101156** **3 Credits**
Introduces learners to the information needs of an organization's stakeholders. This course discusses an organization,Äôs activities and processes. In addition, this course includes a discussion on sales and personal property taxes.

Insurance: Life and Health **10102113** **2 Credits**
This course covers the basic concepts for providing protection from loss of income, health care costs, and premature death. Learners will assess the various types of coverage provided by life, health and disability insurance as part of the larger financial well-being of individuals.

Integrated Care Peer Specialist **10520200** **3 Credits**
The primary function of the Wisconsin Certified Peer Specialist (CPS) is to provide peer support. The CPS engages and encourages peers in recovery form mental health and/or substance use disorders. The CPS provides peers with a sense of community and belonging, supportive relationships, and valued roles. The goal is to promote wellness, self-direction, and recovery, enhancing the skill and ability of peers to engage in their chosen roles. The CPS works with peers as equals.

Integrated Circuit Applications **10662157** **3 Credits**
This course will concentrate on the use of integrated circuits and their applications. The student will use operational amplifiers (op amps) to construct basic amplifiers, active filters, comparators, Schmitt triggers, integrators and differentiators. Special function ICs, such as instrumentation amplifiers and monolithic switching regulators will be used to construct typical circuits used in modern electronic equipment. The use of data and specification sheets, along with internet searches and electronic simulation software, will be emphasized throughout the course.

Integrated Marketing Campaign **10104117** **3 Credits**
This capstone class brings together the concept you learned in your previous marketing courses allowing you to evaluate the status of a business's marketing and create a digital marketing strategy document to achieve organizational goals.

Integration Application Capstone **10620154** **4 Credits**
A culminating course brings together knowledge and skills learned in prior courses to develop, produce, and troubleshoot a capstone project.

Interior Design Portfolio **10304178** **2 Credits**
In this course, students will receive guidance and direction in developing a professional website portfolio for the Annual Student Showcase and future employment prospects. They will learn the art of curating a collection of their finest work, skillfully presenting their unique design style and strengths through effective visual composition and organization. Additionally, students will acquire advanced resume writing, interview techniques and professional networking skills, enabling them to increase their professional visibility and establish a strong personal brand.

Interior Specifications **10304135** **2 Credits**
A study of building construction types, building components, and finish selections and materiality within the built environment. Students will demonstrate understanding of installation principles, FF&E procurement, and product characteristics with a strong emphasis on resilient, sustainable and adaptive design practices and construction solutions that consider the well-being and complexity of the physical, mental and emotional needs of people.

Interior Trim **31410322** **4 Credits**
This course introduces the materials and techniques used to install interior cabinetry and trim work. Students will practice installation of interior doors, casing, base, crown molding, and complete the finish of a stair balustrade in the framing lab. Students will complete the interior finishing aspects of a residential structure to include pre-hung door installation, door and window casing, base board, stair finishes, and cabinet and countertop installation. Students will perform these finishing operations by completing the interior trim work for a newly constructed home.

Interior Trim 1 **31410321** **2 Credits**
This course introduces the materials and techniques used to finish the interior of a home. Students will hang interior doors, install casing, base, and crown molding, and complete the finish of a stair balustrade in the framing lab.

Interior Trim 2 **31410389** **3 Credits**
In this course, students will complete the interior finishing aspects of a residential structure to include: pre-hung door installation, door and window casing, base board, stair finishes, and cabinet and counter top installation. Students will perform these finishing operations by completing the interior trim work for a house on site.

Interm Algebra w Apps **10804118** **4 Credits**
This course offers algebra content with applications. Topics include properties of real numbers, order of operations, algebraic solution for linear equations and inequalities, operations with polynomial and rational expressions, operations with rational exponents and radicals, algebra of inverse, logarithmic and exponential functions.

Intermediate Coding **10530165** **3 Credits**
Prepares students to assign ICD and CPT/HCPCS codes supported by medical documentation and official coding guidance to support appropriate reimbursement. Students will participate in CDI activities, including preparation of appropriate physician queries in accordance with compliance guidelines.

Internet Marketing **10104169** **2 Credits**
Explore how businesses use web sites, blogs, mobile apps, and search engine optimization (SEO) to market their business. You will learn basic web design fundamentals, how to use web content management systems, web-based tool connectivity, and use analytics to measure success.

Internship - Automotive **32404372** **2 Credits**
Student will be responsible to apply employment skills to obtain an internship in an automotive repair facility in the greater La Crosse area. The student can work in multiple areas of the business including parts, service reception and service repair department. This position must be approved by your program student advisor.

Interviewing and Documentation **10520103** **3 Credits**
This course introduces students to interviewing and documentation as practiced in human service agencies. The students will learn theory and human service perspectives in the interviewing process. Students will demonstrate interviewing skills needed for rapport and assessment building and for intervening during a crisis Students will demonstrate skills needed for case note writing. Students also learn about social histories, case assessment, planning, and intervention.

Intro Reading & Study Skills **10838105** **3 Credits**
Provides learners with opportunities to develop and expand reading skills including comprehension and vocabulary. Learners apply reading skills to academic tasks and read to acquire information from a variety of sources. Study skills strategies are also taught.

Intro To Bio-Med Technology **10605100** **1 Credits**
The introductory material in this course will give the student an understanding of the BMET/HTM (BioMedical electronics/Healthcare Technology Management) field. The concepts of the human-instrument system and the problems encountered in obtaining measurements from or treating a living body will be introduced. Medical terminology, hospital safety, accepted practices, ethics, medical instrumentation, the role of a BMET/HTM, creative thinking, teamwork, and study skills are an integral part of this course.

Intro To Food Service Industry **10317116** **1 Credits**
This course will cover all the general facets of the foodservice industry including a brief history of the development of hospitality and professional foodservice, various types and styles of foodservice operations, employment opportunities in foodservice, professional development and certifications, and the benefits of professional networking.

Intro to Addiction & Substance Use Disor **10520107** **3 Credits**
A survey of common and uncommonly used substances available in today's society. Learners will examine the history of drug use along with the changing historical trends of abuse. Learners will explore other types of addictions and how they are similar and dissimilar to chemical addictions. Learners will examine the biology of psychoactive drugs as well as the etiology of addiction.

Intro to Amer Government **10809122** **3 Credits**
Introduces American political processes and Institutions. Focuses on rights and responsibilities of citizens and the process of participatory democracy. Learners examine the complexity of the separation of powers and checks and balances. Explores the role of the media, interest groups, political parties and public opinion in the political process. Also explores the role of state and national government in our federal system.

Intro to Archi Design **10614109** **4 Credits**
The objective of this course is to familiarize students with architectural graphics and to introduce them to the principles and processes of design emphasizing development of basic skills, idea, and techniques used in the architectural design process.

Intro to Auto Technology **32404302** **3 Credits**
This course includes three areas: 1. Automotive shop and environmental safety practices are introduced and safety sheets are signed. 2. Parts room procedures to introduce the functions of the parts sector in relation to the automotive technology field including parts systems, parts research and online parts catalogs. 3. Automotive related instruction which includes gas metal arc welding and oxy fuel cutting and heating.

Intro to Biochemistry **10806186** **4 Credits**
Provides students with skills and knowledge of organic and biological chemistry necessary for application with Medical Lab Technician, Nursing, and other Allied Health careers. Emphasis is placed on recognizing the structure, physical properties and chemical reactions of organic molecules, body fluids, and acids. Additional emphasis is placed on proteins, lipids, carbohydrates and DNA, and the major metabolic pathways.

Intro to Building Envelope Analysis **10481109** **3 Credits**
Students will learn the tools and techniques used in the analysis of building envelope. To meet air tightness goals, students will apply test in and test out methodology. Completion of this course prepares the student for BPI Building Analyst certification.

Intro to Clinical Care Management **10543108** **2 Credits**
This clinical experience applies nursing concepts and therapeutic nursing interventions to groups of patients across the lifespan. It also provides an introduction to leadership, management, and team building.

Intro to College Writing **10831103** **3 Credits**
Introduces basic principles of composition, including organization, development, unity, and coherence in paragraphs and multi-paragraph documents.

Intro to Electric Power Generation **32412420** **2 Credits**
This course is designed to familiarize diesel technician students with the basics of home standby/commercial generators and heavy-duty electric vehicle systems. Instruction will include a strong emphasis on safety as well as electrical fundamentals, alternators, permanent magnet generators, circuit breakers, high voltage components, electric vehicle motors, and gear reduction system types.

Intro to Electromechanical Technology **10620130** **2 Credits**
This course will introduce the student to the field of Electromechanical technology. We will explore the function of the electromechanical technician and employment opportunities. Topics such as hand tools, test equipment, and basic residential wiring practices will be discussed and applied. The course will also cover basic soldering and desoldering of wires and components.

Intro to Energy Effic & Mgmt **10481100** **3 Credits**
Students in this course will be introduced to the principles of energy management and the energy industry. Students will learn about the history of energy production and costs, the dynamics of worldwide energy consumption and growth, the principle methods by which energy is used, and its environmental and financial impacts and consequences. Objectives and components of an effective energy management program are explored. In addition, students will be introduced to the use of building diagnostic tools commonly employed in industry.

Intro to Ethics: Theory & App **10809166** **3 Credits**
This course provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social and/or professional standards of behavior, and apply a systematic decision-making process to these situations.

Intro to Farm Commodities Mkgt **30090365** **3 Credits**
This course is designed to introduce students to the various methods and tools to market farm commodities. Students must be actively engaged in production agriculture to enroll in this course.

Intro to HR Management **10116117** **3 Credits**
Explore strategies and theories of human resources management, including staffing, training, employment law, employee relations, safety, and compensation.

Intro to Health Informatics **10530164** **3 Credits**
Emphasizes the role of information technology in healthcare through an investigation of the electronic health record (EHR), business, and health information software applications. Learners will develop skills to assist in enterprise information management and database architecture design and implementation.

Intro to Horticulture **10001111** **3 Credits**
An overview and introduction to the horticulture profession, including its role and importance throughout history, current trends and the variety of career opportunities will be presented. Topics covered will include fundamentals of practical horticultural cultural practices, plant classification, plant structure, plant growth, plant propagation, landscape design, landscape maintenance, environmental and sustainable relations, and professional development for the student.

Intro to Human Services **10520100** **4 Credits**
This course is designed to give the student an overview of the human service field by exploring historical influences, theoretical approaches, service delivery systems, best practices, and social issues impacting clients.

Intro to Hybrid & Alt Fuel Veh **32404386** **3 Credits**
This course provides a brief history of hybrid electric vehicles, electric vehicle safety, maintenance, equipment and troubleshooting procedures. Also includes current and future alternative fueled vehicle configurations.

Intro to Industrial Control Systems **10664102** **2 Credits**
In this course, learners are introduced to basic concepts of industrial computer-controlled systems. The learner explores various types of programming using robots and PLCs and participates in lab experiments designed to introduce programming principles, electronic inputs and outputs (analog and digital), communication between system components including Ethernet protocols. Upon completion of the course, learners will be able to explain how the control processes are utilized to automate manufacturing facilities.

Intro to Industrial Internet of Things **10664120** **2 Credits**
In this course, learners are introduced to theoretical and practical topics of the Industrial Internet of Things (IIoT). The learner investigates the range of sensor and actuator devices available, ways in which they communicate and compute, methods for getting information to and from IIoT-enabled devices, and ways of visualizing and processing data acquired from the IIoT. Upon completion, learners will utilize hardware and software to construct a sensor network within an existing system and utilize industry standard tools to visual the data captured.

Intro to Industrial Robotics **10664107** **2 Credits**
In this course, learners are introduced to programming techniques for industrial robots. The learner examines teach pendant programming including I/O, routines, decision making, six frames of positional operation, and robot communication. Upon completion of the course, learners will be able to operate and program industrial robots commonly used in Industry 4.0.

Intro to Internat'l Business **10102114** **3 Credits**
This class is designed to make students more aware of the world around them as business becomes more global every day. To effectively compete in the international arena, students must be aware of the demographics, culture, government, political/economic systems and geography of the countries around the world. The class will also discuss the foreign exchange market, ethical differences and structural issues in international business.

Intro to LabVIEW **10662153** **2 Credits**
This course will provide an introduction to the basic LabVIEW software commands and programming used in data acquisition and control. LabVIEW will be used in conjunction with the National Instruments Educational Laboratory Instrumentation Suite (NI ELVIS). The student will perform experiments that collect and measure electrical signals from various transducers or interface circuitry and then store and process the data on the computer. During the data acquisition process, the output of digital or analog control signals to the interface circuitry will be used to provide feedback for circuit optimization and or adjustments.

Intro to MS Access **10103103** **1 Credits**
Designed to introduce the student to the basic features of Microsoft Access. Specific features include creating database structures; adding editing and deleting records; running queries; and printing database objects. Working knowledge of Windows, basic computer knowledge, and touch keyboarding skills are essential.

Intro to MS Excel **10103102** **1 Credits**
Designed to introduce the student to the basic features of Microsoft Excel. Specific features include creating, saving, retrieving, modifying, formatting, and printing spreadsheets and charts. Working knowledge of Windows, basic computer knowledge, and touch keyboarding skills are essential.

Intro to MS Excel and Access **10103107** **3 Credits**
Designed to introduce students to the desktop and operating system of a personal computer, basic features of Microsoft Excel, and basic features of Microsoft Access. Electronic file management (directories and folders) will also be covered.

Intro to MS PowerPoint **10103104** **1 Credits**
Introduce students to Microsoft PowerPoint software to create effective presentations. Students navigate through a presentation; apply slide formats; use outline view; print various formats; use the organization chart feature; insert and manipulate clip art, word art, and graphics; embed Excel charts; and use slide show features. Working knowledge of Windows, basic computer knowledge, and touch keyboarding skills are essential.

Intro to MS Word **10103101** **1 Credits**
Designed to introduce the student to the basic features of Microsoft Word. Specific features include creating, saving, retrieving, modifying, and printing documents. Working knowledge of Windows, basic computer knowledge, and touch keyboarding skills are essential.

Intro to Mechatronics **10664110** **2 Credits**
In this course, learners are introduced to microprocessor controlled electromechanical systems. The learner examines how individual components work, and how they are integrated into simple systems. Upon completion of the course, learners will understand what technicians do in the workplace and how industry utilizes Mechatronics in advanced manufacturing.

Intro to Media Production **10206110** **3 Credits**
Students will receive exposure to equipment used in media production, including set up and take down, video, audio, lighting and other components used in the creation of presentation and media materials. Students will also explore careers in the media world. This class concentrates on building basic camera skills, editing skills, a grasp of the pre-production processes, basic digital file management, and effective lighting, all while creating media projects. This course is computer intensive and requires a solid understanding of internet tools and resources.

Intro to Motion Graphics **10206111** **3 Credits**
This course provides an introduction to the world of motion graphics, a field that combines graphic design with animation to create dynamic visual content. Students will learn the fundamental concepts of animation and design, as well as how to use a motion graphics program to create engaging visual content. Students will learn how to use keyframes to create motion, work with text and graphics, and create animations that react to audio.

Intro to Paralegal & Ethics **10110101** **3 Credits**
This course provides students with an introduction to the legal profession, the American legal system, legal ethics, legal terminology, legal research, and selected areas of substantive law.

Intro to Process Controls **10620102** **2 Credits**
This course introduces the concepts of automatic process control on the technician level. Students will study process controls for flow, pressure, temperature, and level found in industrial applications. Open and closed loop feedback will be used with different controller modes to improve overall stability. Safety of these systems will be covered through labs and class discussions.

Intro to Psychology **10809198** **3 Credits**
An introductory course in psychology surveying the multiple aspects of human behavior. It addresses the theoretical foundations of human functioning in such areas as perception, learning, motivation, development, personality, health and pathology, exploring physiological and environmental influences. It directs the student to an insightful understanding of the complexities of human relationships in personal and vocational settings.

Intro to Sociology **10809196** **3 Credits**
Introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues.

Intro to Surgical Technology **10512125** **4 Credits**
Provides the foundational knowledge of the occupational environment. Principles of sterilization and disinfection are learned. Surgical instruments are introduced. Preoperative patient care concepts are simulated. Lab practice is included.

Intro to Welding **10442102** **2 Credits**
A 2-credit course to prepare welding students to be successful in the lab and online. Topics covered will include Blackboard (or current LMS) usage, email, zoom, and basic metal shop safety. The students will get introduced to the most frequently used equipment in the shop such as welders, grinders, saws, and shears. Students will also cover basic shop and fabrication math principles and skills.

Intro to World Religions **20809223** **3 Credits**
An introduction to world religions including Native American religions, Judaism, Christianity, Islam, Hinduism, Buddhism, Taoism and others. The course will study the historical roots of religion and religions as well as the basic tenets or religion(s). It will endeavor to find commonalities and distinguishing characteristics between the religions. It will also ask and attempt to find some answers in scriptures and the writings of adherents to the questions: Why do religions exist? Why have people striven for knowledge that apparently transcends experience and rational thought based on experience? What is the knowledge that religions purport to lead us to?

Introduction To ADN - the LPN **10543131** **1 Credits**
Introduces the Licensed Practical Nurse (LPN) to the role of the Associate Degree Nurse (ADN). Explains the curriculum and policies which govern the ADN program. Emphasis is on facilitating role transition for the LPN who qualifies for advanced placement in the ADN program.

Introduction to .NET **10152190** **3 Credits**
Presents Windows-based programming through the use of .NET. Emphasis is on windows form creation, .NET syntax, control structures, common Windows controls, arrays, text files, common dialog boxes and object oriented principles.

Introduction to Accounting **10101108** **3 Credits**
The learner will study double-entry accounting, the accounting cycle, merchandise inventory, and payroll. Learners will complete a manual and computerized practice set.

Introduction to Building Science **10481106** **3 Credits**
Students will study the concepts associated with the theory, materials, and methods used in construction to include footings and foundations, walls, floors, roofs and roof materials, exterior finishes, interior walls, ceiling and floor finishes, insulation types, vapor and air infiltration, sound protection and building codes. Additionally, student will become familiar with blueprint reading and examine all the trades associated with construction including electrical, HVAC, and plumbing. The safe use of the appropriate tools for each trade will also be covered. Additionally, students will explore building codes and standards.

Introduction to Business **10102106** **3 Credits**
Students study the components of the U.S. business enterprise system and discover how these components fit together in successful organizations. Regardless of the career chosen, or position within a company, it is imperative to understand the interrelationship among the various functional areas of a business.

Introduction to Cybersecurity **10151100** **1 Credits**
Introduction to Cybersecurity explores the field of cybersecurity, specifically the importance of cybersecurity, data confidentiality, best practices for using the internet and social media safely, and potential career opportunities in this growing field.

Introduction to Data Analytics **10156102** **2 Credits**
Assess data quality and characteristics and apply descriptive and diagnostic techniques to provide insight and answers to business questions. Appropriately communicate findings. Microsoft Excel will be used extensively.

Introduction to Diversity Studies **10809172** **3 Credits**
This is a course that draws from several disciplines to reaffirm the basic American values of justice and equality by teaching a basic vocabulary, a history of immigration and conquest, principles of transcultural communication, legal liability and the value of aesthetic production to increase the probability of respectful encounters among people. In addition to an analysis of majority/minority relations in a multicultural context, the topics of ageism, sexism, gender differences, sexual orientation, the disabled and the American Disability Act (ADA) are explored. Ethnic relations are studied in global and comparative perspectives.

Introduction to Engineering **10623260** **3 Credits**
This lab-based course introduces engineering students to basic engineering skills, data analysis and graphical methods, engineering project design, and descriptions of engineering disciplines. Students will learn skills in mathematics and physics, measurement techniques, uncertainty and tolerances, drafting, plotting, data analysis, project design, project fabrication, testing, writing lab reports, and professional presentation skills. Content areas include unit systems and conversions, engineering ethics, statistics, statics, material properties, heat transfer & thermodynamics, hydraulics, and electronic circuits.

Introduction to Finance **10114116** **3 Credits**
Students explore the fundamentals of finance in this course introducing them to the areas of insurance, investing, and banking. They gain an understanding of these challenging and rewarding careers in this program introductory course. Students will participate in a variety of activities, including tracking a corporation's weekly stock price during the semester and presenting their research to the class. Students will explore study strategies and build their academic success plan.

Introduction to Gerontology **10520150** **3 Credits**
The Gerontology course identifies issues that will increase learner's knowledge in the area of aging. The focus will be on mental health issues, health issues, socioeconomic factors, and other forces that impact the aging process and the individual's adaptation to it. Learners will recognize the common elements to the aging process focusing on dynamics of the individual, social support systems, and programs to help those with special issues in the aging process.

Introduction to Human Services **10520101** **3 Credits**
This course is designed to give the student an overview of the human service field. Students will learn about the various types of human service agencies and occupations available in the field, and the qualities of the personnel in those fields. Students will get firsthand experience with at least one local human service agency.

Introduction to Java **10152153** **3 Credits**
This course covers theoretical concepts and basic features of the Java programming language. Topics covered include data types, operators, control structures, arrays, Java functions, user-defined functions and object-oriented principles. Students will learn to develop the skill of formulating problem solution steps and translate that solution into Java code. Creating programs with graphical user interfaces and writing applets is also covered.

Introduction to Literature **20801204** **3 Credits**
Recommended as a first course in literary analysis, this course introduces students to the major genres of literature and addresses issues related to writing about literature and/or other texts.

Introduction to Molecular Diagnostics **10513170** **2 Credits**
Introduces the principles and application of molecular diagnostics in the clinical laboratory.

Introduction to Occupational Therapy **10514171** **3 Credits**
Provides an overview of history, philosophy, ethics, and scope of occupational therapy practice. Examines legal responsibilities, professional resources, and organization. Students practice basic skills related to therapeutic relationships and determine their own suitability to a career in occupational therapy.

Introduction to Philosophy **20809260** **3 Credits**
This course introduces various fields of philosophy, philosophical methodology and the history of philosophy. Examines some philosophical issues in depth and develops the ability to think, speak and write critically about these problems that have concerned human beings for centuries.

Introduction to Plant Science **10006127** **2 Credits**
Embark on an enlightening journey through the intricate world of plants, from seed germination to towering trees. This immersive course blends hands-on workshops, interactive activities, and scenario-based gallery walks, unraveling the mysteries of plant anatomy, life stages, environmental impacts, and hormonal influences. Whether you're an aspiring botanist or a curious gardener, discover the secrets within every leaf, stem, and root, and cultivate a deeper understanding of the green world around us.

Introduction to Radiography **10526158** **3 Credits**
Introduces students to the role of radiography in health care. Students apply medical terminology, legal and ethical considerations to patient care and pharmacology in the radiologic sciences.

Introduction to Refrigeration **10601105** **3 Credits**
This course provides a comprehensive introduction to refrigeration technology and its applications in the HVAC industry. Emphasis will be placed on fundamental concepts such as refrigerant properties, refrigeration cycle, and refrigeration components. Throughout the course, students will learn how to create and interpret refrigeration diagrams, select refrigeration equipment, troubleshoot refrigeration systems, and comply with regulations pertaining to refrigeration safety and environmental protection. Demonstrate proficiency in using tools commonly used in the refrigeration industry, such as gauges, thermometers, multimeters, and vacuum pumps.

Introduction to Soils **10006173** **2 Credits**
Intro to Soils examines the fundamentals of soils physical properties, chemical properties, biological properties, soil formation, classification, essential nutrient and soil survey. There will be emphasis on soil and water conservation practices that can be used to reduce soil erosion. Participants will experience soils concepts through lab and in-the-field activities.

Introduction to Welding **10442105** **1 Credits**
A 1 credit course to prepare welding students to be successful in the lab and online. Topics covered will include Blackboard (or current LMS), email, and basic metal shop safety. The students will also get introduced to the most frequently used equipment in the shop such as welders, grinders, saws, and shears.

Introductory Plant Science **10006129** **3 Credits**
Provides fundamental knowledge of plant components and their functions. Topics include pollinating and propagating plants, germinating seeds, plant nutrients and factors affecting photosynthesis, respiration and tranpiration. We will investigate how these functions help the plant sustain itself. Participants will experience plant components and their functions through the completion of hands-on activities.

Introductory Statistics **10804189** **3 Credits**
Students taking Introductory Statistics display data with graphs, describe distributions with numbers perform correlation and regression analyses, and design experiments. They use probability and distributions to make predictions, estimate parameters, and test hypotheses. They draw inferences about relationships including ANOVA.

Investigative Strategies **10504853** **1 Credits**
This course provides an analysis of the principles of evidence recognition, preservation, and crime scene processing. It examines techniques of at-scene and follow-up investigation along with the basics of interviewing and interrogation.

Investment Principles **10114177** **3 Credits**
This course makes students aware of the various investments available. Topics include common and preferred stock, corporate and government bonds, derivatives, mutual funds, real estate, retirement investment vehicles, and portfolio management. Students create an investment portfolio and present their recommendations to the class.

IoT Career Development **10631102** **1 Credits**
Explore career and professions related to the cross roads of Operational Technology and Informational Technology.

IoT Integration Career Development **10631101** **2 Credits**
Explore career and professions related to the cross roads of Operational Technology and Informational Technology.

IoT Integration Field Study **10631110** **1 Credits**
Enhance your IoT Integration Specialist skills by investigating applications in a variety of industries. Research and selection of a field study or job shadow will be the key focus of this course.

IoT Security **10631125** **2 Credits**
IoT Security explores how to conduct vulnerability assessment on all aspects of the IoT system from the device layer to the application layer. It then explores how to use vulnerability assessments to evaluate and assess the risk of each vulnerability in a given business context.

Irrigation Maintenance **10001118** **2 Credits**
This course is designed for students new to the irrigation industry. In this introductory course students will learn the basics of irrigation installation. Topics that will be covered include: introduction to irrigation, product identification and terminology, basics of an irrigation system, basic design considerations and reading. Hands on segments include techniques in installation, system programming, head repairs, valve repairs, low voltage wiring problem solving, and repairs to water lines.

Java 2 **10152155** **4 Credits**
The goal as programmers, is to create reliable, efficient, and sustainable solutions to problems. Java 2 introduces powerful design concepts and algorithms that programmers utilize to solve challenging problems congruent with these goals. The course starts with a brisk review of select topics from Java I and proceeds to more advanced design centric concepts. Using the Java programming language, Java 2 focuses on the more complex aspects of programming, design, data structures, algorithms, I/O, performance, and etc.

Justice Administration **10504824** **3 Credits**
This course provides an exploration of our justice process and those organizations tasked with ensuring justice. It explores daily operational shift realities for line personnel along with supervisors, managers, and administrators of police, courts, and corrections.

Juvenile Justice **10504821** **3 Credits**
This course provides a survey of the history and development of juvenile justice, juvenile law, and the roles of stakeholders involved in the juvenile justice process.

Keyboarding Fundamentals **10106133** **1 Credits**
Promotes development of keyboarding competency (speed and accuracy) on a computer using proper fingering technique (touch system) for the alphabetic keyboard including the top row keys (numbers and symbols) and numeric ten-key pad.

Landscape Construction **10001132** **3 Credits**
The principles and practices for construction and installation of various landscape features in the urban environment will be introduced. Construction techniques relevant to interpreting blueprints, structural component, and following manufacturer's specifications will be covered. Safety practices will be emphasized for construction practices including: paver walks and patios, steps, irrigation systems, water features, retaining walls, and fencing. Sustainability for construction practices will be emphasized in all labs and field experiences.

Landscape Design **10001123** **3 Credits**
Landscape Design will emphasize drawing techniques and utilization of a computer aided drafting program. A major component of the course is to design a project emphasizing hardscaping and plant material and working with a client. A full drawing and budget presentation will be accomplished.

Landscape Design Principles **10001134** **1 Credits**
Step into the world of landscape design. From foundational principles to hands-on applications, discover the art and science behind creating outdoor spaces that captivate and inspire. Whether you're a budding designer or a nature lover, this course promises to fuel your passion and hone your expertise in landscape architecture.

Landscape Installation and Maintenance **10001116** **3 Credits**
Unlock the secrets to transforming bare land into breathtaking landscapes. Designed for both budding and experienced landscapers. This course offers a blend of theoretical knowledge and hands-on experience, covering key competencies from analyzing landscape designs and prioritizing safety to mastering landscaping tools and techniques. Students will engage in interactive workshops, hands-on activities, and critical evaluations of landscaping practices. The culmination of the course is a real-world residential landscape installation where students can showcase their acquired skills and knowledge. Join us to transform your landscaping expertise and bring designs to life.

Landscape Maintenance 1 **10001117** **2 Credits**
This course will provide hands-on learning opportunities for the students in landscape maintenance. Students will experience the operation of landscape tools and equipment, as well as learn and practice maintenance skills such as tree and shrub planting, incorporating soil amendments to planting beds, fertilizing, mulching, as well as the operation of skid steer endloaders, landscape tractors, and trucks with trailers. Students will also learn proper safety practices for equipment, tools, supplies and personal protection equipment.

Landscape Maintenance 2 **10001127** **2 Credits**
This course will provide hands-on learning opportunities for the students in landscape maintenance. Students will experience the operation of landscape tools and equipment, as well as learn and practice maintenance skills such as tree and shrub planting, incorporating soil amendments to planting beds, fertilizing, mulching, as well as the operation of skid steer endloaders, landscape tractors, and trucks with trailers. Students will also learn proper safety practices for equipment, tools, supplies and personal protection equipment.

Landscape Site Assessment **10001145** **3 Credits**
Dig into the vibrant world of horticulture with Landscape Site Assessments. This course bridges cityscapes and countryside, unveiling the art of landscape assessments for those keen to shape sustainable environments. Through hands-on fieldwork and workshops, you'll understand the unique challenges and solutions of both urban and rural terrains. Key takeaways include mastering the essentials of landscape site assessments, understanding contrasting urban and rural dynamics, designing actionable strategies for diverse landscapes, and crafting impactful assessment reports. Enroll now and become a pivotal force in the future of sustainable landscaping!

Leadership Development **10196190** **3 Credits**
The learner applies skills and tools necessary to fulfill his/her role as a modern leader. Learners demonstrate the application of evaluating leadership effectiveness and organization requirements, individual and group motivation strategies, implementing mission and goals, ethical behavior, personal leadership style and adaptation, impacts of power, facilitating employee development, coaching, managing change, and effective conflict resolution.

Leadership for Business **10102151** **3 Credits**
This course will enable students to navigate the complexities of communication with hands-on exercises, practicing diverse approaches to handling difficult conversations. Students will be encouraged to develop a proactive mindset to predict and overcome challenges, while cultivating resilience and strategic thinking. In addition, students will have the opportunity to uncover the positive impact of community involvement and delve into effective goal-setting techniques and time management strategies, honing the skills necessary for achievement.

Leadership: Conflict & Change **20890261** **1 Credits**
Drawing from the Phi Theta Kappa Leadership Development Studies curriculum, this course explores concepts of leadership, with a focus on the critical role that communication plays in leadership. Through experiential exercises, the study of films, and readings from the humanities, participants will explore the process of decision making, the managing of conflict, and the implementation of change.

Leadership: Philosophy & Vision **20890263** **1 Credits**
Drawing from the Phi Theta Kappa Leadership Development Studies curriculum, this course explores concepts of leadership, with a focus on the critical role that communication plays in leadership. Through experiential exercises, the study of films, and readings from the humanities, participants will explore philosophies of leadership, articulation of vision, and ethical consideration of leaders.

Leadership: Serving & Empowering **20890262** **1 Credits**
Drawing from the Phi Theta Kappa Leadership Development Studies curriculum, this course explores concepts of leadership, with a focus on the critical role that communication plays in leadership. Through experiential exercises, the study of films, and readings from the humanities, participants will explore servant leadership, the building of teams, and empowering others as leaders.

Lean Production Techniques and Systems **10623200** **2 Credits**
The learner applies the skills and tools necessary to fully participate in a lean manufacturing environment. Each learner will demonstrate the application of the basic lean tools, different approaches to problem solving, a systemic process of problem definition, data acquisition, analysis, developing alternative solutions, solution implementation, and evaluation.

Legal Aspects of Business Orgs **10110107** **3 Credits**
This course will provide students with the basic skills necessary to form a business organization, operate the organization in compliance with legal requirements, and draft legal documents involving corporate litigation.

Legal Issues for the Workplace **10196134** **3 Credits**
Each learner will demonstrate the application of legal practices in both union and non-union environments, analysis of the impact of U.S. employment laws, the impact of the global economy, the appeal process, reacting to legal charges, documenting the hiring and firing process, dealing with harassment issues, privacy issues, and summarizing legal issues facing contemporary supervisors.

Legal Research **10110104** **3 Credits**
A course that demonstrates the use of search materials, including computerized searches, to locate relevant case law, statutory law, and administrative law as well as secondary sources and to use proper citation format and updating materials.

Legal Technology **10110135** **3 Credits**
This course for Paralegal majors will provide learners with practical knowledge of the application of computers in the legal environment. The course will consist of hands-on experience in the application of legal software and the internet to the current practice of law.

Legal Writing **10110105** **3 Credits**
This course addresses the principles of effective legal writing and its fundamentals. Students will draft legal memoranda, memoranda, case briefs, pleadings, motions, legal correspondence, and other forms of correspondence to gain skills in communicating legal concepts in various areas of the law. The students will also learn to perform analytical writing and communicate it effectively in writing.

Lending Principles **10114187** **3 Credits**
Students learn about the control and management of credit and the underlying principles that govern lending decisions. Consumer, commercial, and real estate lending is the focus of this course. Students examine the lending decisions made by loan officers.

Linux Administration **10150137** **3 Credits**
Topics covered in this course are installation and deployment of an enterprise Linux operating system locally and in the cloud, system start-up and shutdown procedures, basic and advanced file system management, device management, backup and system recovery, syslog configuration, network configuration, user accounts and permissions, remote administration, and system security permissions.

Livestock Management **10006179** **3 Credits**
Students study the principles and processes of reproduction, genetics, live and carcass evaluation, and health and management of livestock. Field trips and hands-on activities will be used to effectively reinforce the material presented in class. Students will demonstrate the ability to perform profitability comparisons.

Livestock Nutrition **30090363** **3 Credits**
This course is designed to enable the student to apply basic principles of livestock nutrition and determine livestock nutrient requirements. Inventorying and evaluating feeds, calculating cost of production for livestock enterprise and measuring livestock feeding efficiency through business analysis are included in this class. Students will also be able to develop Standard Operating Procedures for livestock feeding and investigate emerging trends including new technology, industry regulations, consumer trends and public policy. All classes in the Farm Business and Production management program include instruction on financial analysis and management of the farming operation.

Livestock Nutrition Principles **10006171** **3 Credits**
The student will demonstrate how to formulate and balance rations for all forms of livestock. In addition, they will also be able to know the nutritional needs of various species and identify different feedstuffs. Students will be familiar with the laws and regulations on livestock feeding along with reading, interpreting, and making recommendations from feed test reports and tags. They will also be able to successfully understand the digestive systems of monogastric and ruminant animals.

Livestock/Farmstead Equipment Management **30090373 3 Credits**
Livestock management provides instruction on the various phases of selection, breeding, herd health, raising of replacement stock, and marketing livestock and livestock products. It includes the selection, operation, and maintenance of milking, feed, ventilation, manure handling, equipment and farm buildings. Students will learn to determine cost of ownership for farm buildings and equipment and formulate standard operating procedures for livestock. All classes in the Farm Business and Production management program include instruction on financial analysis and management of the farming operation.

MLT Seminar **10513160** **1 Credits**
Topics to include current and/or emerging trends; writing techniques, resume writing and interviewing skills; Board of Certification Exam preparation

Machine Learning - Operations Management **10196150 3 Credits**
This course begins by helping you reframe real-world problems in terms of supervised machine learning. Through understanding the ingredients of a machine learning problem, you will investigate how to implement, evaluate, and improve machine learning algorithms. You will explore a variety of machine learning algorithms and their uses in realistic scenarios.

Machine Setup 1 for CNC Milling **10444213** **1 Credits**
Requires the learner to set up CNC milling machines for single tool with manual touch off through tool selection, work holding devices, and program call up and proofing.

Machine Setup 1 for CNC Turning **10444215** **1 Credits**
Requires the learner to set up CNC Turning machines for projects that require the application of two tools through tool selection and setup, work holding devices and program call up and proofing.

Machine Setup 2 for CNC Milling **10444214** **1 Credits**
Requires the learner to set up CNC milling machines for multiple tools with electronic probing through tool selection, work holding devices, and program call up and proofing. Student should complete Machine Setup 1 for CNC Milling prior to starting this course.

Machine Setup 2 for CNC Turning **10444216** **1 Credits**
Requires the learner to set up CNC Turning machines for projects that require the application of multiple tools with electronic probing through tool selection and setup, work holding devices and program call up and proofing. Students should complete Machine Setup 1 for CNC Turning prior to starting this course.

Machining Employment Prep **10420202** **1 Credits**
Requires the learner to cultivate interpersonal and communication skills needed of Machining employees.

Machining Professional Portfolio **10420225** **1 Credits**
Requires the learner to apply technical skills as well as work productively, communicate effectively, and demonstrate ethics in a professional work environment.

Machining for Maintenance **10420105** **3 Credits**
This course is a basic introduction to machining and machine tool concepts for industrial maintenance personnel. Fundamental lathe, mill and drill processes will be covered along with layout skills and tool usage in a hands-on lab environment.

Management of HIM Resources **10530167** **3 Credits**
Examines the principles of management to include planning, organizing, human resource management, directing, and controlling as related to the health information department.

Managerial Finance **10114156** **3 Credits**
Students apply accounting and financial ratios to solve corporate financial strategic planning problems. By learning how to analyze cash flows, determine net present values, internal rates of return, etc., students develop the ability to evaluate corporate investment opportunities. Students will prepare a financial analysis to determine if the venture should be undertaken.

Managing Office Finances **10106188** **3 Credits**
Students will acquire an understanding of fundamental accounting terminology and practices. Specifically, students will learn the language of business and how to analyze and document business transactions including payroll.

Managing People **10102153** **3 Credits**
This course establishes a foundation for front line supervisory effectiveness. Learn the key supervisory functions of planning, organizing, goal setting, leadership and accountability. Develop practical skills in hiring, training, communication, motivation, counseling, employee evaluation and conflict resolution. The course includes important theories and readings, case studies, role playing, group projects, and self-assessment to develop your own supervisory philosophy.

Managing for Quality **10196192** **3 Credits**
The learner applies the skills and tools necessary to implement and maintain a continuous improvement environment. Learners will demonstrate the application of a personal philosophy of quality, identifying all stakeholder relationships, meeting or exceeding customer expectations, a systems-focused approach, using appropriate models and tools, managing a quality improvement project, and measuring effectiveness of continuous improvement activities.

Manual Torch Metal Cutting Theory & Tech **10442106** **1 Credits**
This course is designed to teach theory and technique of cutting and heating for the purposes of: loosening; joint preparation for welding and repair; structural shape coping using oxy-acetylene, air carbon arc and plasma arc techniques.

Manufacturing Math 1 **31804334** **1 Credits**
Essential math skills for entry level manufacturing careers. Topics covered include addition, subtraction, multiplication, and division of fractions and decimals; English (customary)- metric conversion; and hands-on applications involving measurement and tolerances. Prerequisite: Passing score on skills assessment.

Marketing Career Preparation **10104103** **3 Credits**
Develop skills to enhance your success. You will be introduced to personal branding by determining your strengths and the image you want to project as it applies to your personal life, your college life, and your career as a marketer. You will explore who you are, what motivates you to gain new knowledge and skills, and plan the path you want your professional development to take. You will look into marketing careers that match those skills, develop a marketing program academic plan, and start your own website portfolio that demonstrates your skills.

Marketing Financials **10104110** **3 Credits**
This class is designed to expose the learner to basic accounting concepts, which will provide a framework for the general financial analysis all businesses conduct. The student will learn the basic accounting cycle along with the fundamental principles of depreciation, inventory, cash flow, accruals and deferrals. With this context in place, the student will then be able to construct and analyze common financial statements. Particular attention also will be placed on the pricing of a product. Concentration will be centered on break-even analysis and cost behavior.

Marketing Management **10104146** **3 Credits**
As the capstone course for Marketing majors, the learner will apply their knowledge to solve a business opportunity or problem by developing marketing objectives and strategies for a local business. Student teams will work with the area business to implement their recommendations in a competitive environment. A marketing plan for the business also will be developed as the framework for achieving stated marketing objectives.

Marketing Principles **10104114** **3 Credits**
Marketing Principles represents the comprehension of the marketing concept and functions. Major concepts include segmentation, marketing mix, buyer behavior, decision support systems, consumer and business-to-business products, multicultural and global aspects, business ethics, and e-business. Marketing careers are explored.

Marketing-Research **10104155** **3 Credits**
Designed for students to generate and develop marketing information for use in effective decision making. The roles and methodology of conducting primary and secondary research are emphasized. Use of the Internet and survey software are used to conduct actual marketing research for a business.

Materials and Resources **10304146** **2 Credits**
This course delves into the world of interior design materials and resources, focusing on their properties, characteristics, and proper specification. Students will gain insights into the environmental impact and sustainability considerations associated with materials, as well as the intricate processes involved in their manufacturing and distribution. Students will be given the opportunity to establish valuable relationships with industry sales representatives. By the course's conclusion, students will possess the knowledge and skills necessary to make informed material choices, create material specifications, and finish schedules.

Math & Logic **10804133** **3 Credits**
Students will apply problem-solving techniques from discrete mathematics. Topics include symbolic logic, basic set theory, algebra, base number systems, and Boolean algebra.

Math Analysis **20804229** **5 Credits**
An integrated treatment of topics from college algebra and trigonometry lays a sound foundation for higher courses in mathematics. Includes linear and quadratic functions, other polynomial functions, rational functions, radical functions, exponential and logarithmic functions, the trigonometric functions, and some analytic geometry in the plane.

Math w Business Apps **10804123** **3 Credits**
This course covers...real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications.

Mathematics for Decision Making **20804210** **4 Credits**
This course is designed to teach students the mathematical skills needed for decision making in the 21st century. Topics for this course include set theory, syllogisms and fallacies, counting and probability, financial mathematics, and statistical concepts.

Measurement and Inspection **10420203** **1 Credits**
Requires the learner to use measurement tools and inspection equipment to maintain standards of quality in the manufacturing environment. Students are encouraged to take this course concurrently with Fundamentals of Machining and Blueprint Reading.

Mechanical Drives **10620144** **2 Credits**
Mechanical drive components and systems are studied with emphasis on selection, application and proper installation techniques. Topics include machine safety, torque, power, efficiency, bearings, couplings, alignment, v-belt drives, chain drives, gear drives and multi-shafting drives. Industrial equipment is used to present these topics. Gearbox characteristics and troubleshooting will also be explored.

Mechanisms and Dynamics **10606156** **3 Credits**
Mechanisms: A study of the motion of mechanical systems using graphical and analytical methods as well as 3D computer modeling and simulations tools. Topics include the displacement of linkages, velocity and acceleration calculations and force analysis.

Mechatronics Internship **10664106** **1 Credits**
In this course, students will be exposed to various activities within advanced manufacturing as they relate to the design, implementation, and maintenance of automated industrial systems. Students will work with an employer partner to experience how industrial maintenance, automation, and IT are all interconnected.

Med Law, Ethics & Prof **10160120** **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 quality improvement procedures, examine legal and bioethical issues, and demonstrate awareness of diversity.

Med Office Insurance & Finance **31509307** **2 Credits**
Introduces medical assistant students to health insurance and finance in the medical office. Students perform bookkeeping procedures, apply managed care guidelines, and complete insurance claim forms. Students use medical coding and managed care terminology to perform insurance related duties.

Medical Admin Procedures **10501110** **2 Credits**
Introduces students to office management, business administration, and the electronic medical record (EMR) in the medical office. Students learn to schedule appointments, perform filing, record keeping, telephone and reception duties, communicate effectively with patients and other medical office staff, keep an inventory of supplies, and prepare insurance claim forms.

Medical Admin Professional Capstone **10160150** **1 Credits**
This capstone course serves as the culminating experience for students pursuing a degree in Medical Administrative Professional studies. Designed to integrate and apply the knowledge and skills acquired throughout the program, the course will be a final evaluation of the students healthcare related critical thinking, problem-solving, and practical application skills gained throughout the program.

Medical Assistant Practicum **31509310** **3 Credits**
Requires medical assistant students to integrate and apply knowledge and skills from all previous medical assistant courses in actual ambulatory health care settings. Learners perform medical assistant administrative, clinical, and laboratory duties under the supervision of trained mentors to effectively transition to the role of a medical assistant. This is a supervised, unpaid, clinical experience. AAMA required Practicum- 160 minimum hours (AAMA minimum) up to 216 hours.

Medical Asst Admin Procedures **31509301** **2 Credits**
Introduces medical assistant students to office management, business administration, and the electronic medical record (EMR) in the medical office. Students learn to schedule appointments, perform filing, record keeping, telephone and reception duties, communicate effectively with patients and other medical office staff, and keep an inventory of supplies.

Medical Asst Clin Procedures 1 **31509304** **4 Credits**
Introduces medical assistant students to the clinical procedures performed in the medical office setting. Students perform basic examining room skills including screening, vital signs, patient history, minor surgery and patient preparation for routine and specialty exams in the ambulatory care setting.

Medical Asst Clin Procedures 2 **31509306** **3 Credits**
Prepares medical assistant students to perform patient skills in the medical office setting. Students perform clinical procedures including administering medications, performing an electrocardiogram, assisting with respiratory testing, educating patients / community, and assisting with emergency preparedness in an ambulatory care setting.

Medical Asst Lab Procedures 1 **31509303** **2 Credits**
Introduces medical assistant students to laboratory procedures commonly performed by medical assistants in a medical office setting. Students perform Clinical Laboratory Improvement Amendments (CLIA) waived routine laboratory procedures commonly performed in the ambulatory care setting. Students follow laboratory safety requirements and federal regulations while performing specimen collection and processing, microbiology, and urinalysis testing.

Medical Asst Lab Procedures 2 **31509305** **2 Credits**
Prepares students to perform phlebotomy and Clinical Laboratory Improvement Amendments (CLIA) waived hematology, chemistry, immunology and laboratory procedures commonly performed by medical assistants in the ambulatory care setting.

Medical Emergencies **10531930** **3 Credits**
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a medical complaint.

Medical Imaging Systems **10605202** **4 Credits**
This course provides an overview of medical imaging systems with emphasis on X-ray systems, components, and circuits. The basic theory of operation, safety concerns, and typical applications of major imaging modalities is investigated, including: X-Ray, Ultrasound, CT, MRI, Mammography, Mobil radiography, Fluoroscopy, Nuclear Medicine, Linear Accelerators, and some additional modalities. If available, a portion of the course labs will take place in a regional medical center. Introductory ideas related to preventative maintenance and repair are also discussed.

Medical Instrumentation **10605206** **3 Credits**
Research and study of a variety of medical equipment devices commonly encountered in the clinical healthcare environment. The functional application, basic theory of operation, categorization, typical safety concerns, and typical maintenance of a wide variety of medical devices will be covered. Basic building blocks that make up medical devices will be investigated. For a selection of medical devices hands on experiences will include utilization of documentation, testing, safety, and maintenance. Supporting concepts in medical terminology, anatomy and physiology, and chemistry will be explored and used.

Medical Law, Ethics & Profess **31509309** **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 quality improvement procedures, examine legal and bioethical issues, and demonstrate awareness of diversity.

Medical Office Finance **10106189** **2 Credits**
Introduces students to financial functions in the medical office setting. Students perform bookkeeping and billing procedures. Students learn about the revenue cycle and apply financial principles.

Medical Office Insurance **10106190** **2 Credits**
Introduces students to health insurance in the medical office setting. Students apply managed care principles and prepare health insurance claim forms. Students use coding and managed care terminology to perform insurance related duties.

Medical Office Practicum **10160160** **3 Credits**
Provides students with a simulated on-the-job medical office experience. Students will also expand their knowledge of the requirements necessary for employment in the medical profession by creating a cover letter and resume.

Medical Terminology **10501101** **3 Credits**
Focuses on the component parts of medical terms: prefixes, suffixes and root words. 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.

Medical Terminology for Med Assistants **31509320** **2 Credits**
Focuses on the component parts of medical terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems.

Medical and Psychosocial Conditions **10514172** **3 Credits**
Introduces medical and psychosocial conditions as they relate to occupational therapy practice. Topics include etiology, symptomology, and prognosis as they relate to occupational performance.

Medication Assistant **30510109** **2 Credits**
This competency-based program is for certified nursing assistants who will, upon completion, be involved with administration/distribution of medications to residents in a skilled care nursing facility. Employer approval, proof of work experience and a pre-enrollment assessment are required for participation in this course.

Meeting & Event Planning **10106182** **2 Credits**
This course focuses on planning a successful meeting/event. Topics include conducting the planning activities, managing the finances, promoting the meeting/event, facilitating the on-site needs, analyzing contracts, arranging travel and transportation needs, and conducting follow-up activities while communicating effectively with all stakeholders.

Mental Health & Community Concepts **10543110** **2 Credits**
This course will cover topics related to the delivery of community and mental health care. Specific health needs of individuals, families, and groups will be addressed across the lifespan . Attention will be given to diverse and at risk populations. Mental health concepts will concentrate on adaptive / maladaptive behaviors and specific mental health disorders. Community resources will be examined in relation to specific types of support offered to racial, ethnic, economically diverse individuals and groups.

Mfg Processes/Machining CAM **10420120** **3 Credits**
This course examines primary and secondary manufacturing processes. You will use the tools of traditional material removal processes by making a part. You will also study forming, casting, and other manufacturing techniques and their applications. Final assembly and finishing are examined. You will be required to visit manufacturing facilities to observe the day-to-day operations of modern manufacturing. The student will learn a computer aided manufacturing (CAM) software. They will model a part and then take the part into the CAM software and machine the part using the CNC machine.

Mfg and Eng Materials **10420119** **3 Credits**
Material selection is a critical component of the design and production process. If the properties of the material selected do not meet the specifications of the product, or if the material selected is not appropriate for the required manufacturing operations, product failure will be the result. This learning experience will introduce you to the properties, classifications, and applications of the materials used in the design and manufacture of a product. You will assess the characteristics of materials that impact the selection and utilization of materials in design and manufacturing through lab activities, problem solving, independent study and research.

Microbiology **10806197** **4 Credits**
This course examines microbial structure, metabolism, genetics, growth and the relationship between humans and microorganisms. Disease production, epidemiology, host defense mechanisms and the medical impact of microbes in the environment, industry, and biotechnology are also addressed.

Military Medic RN Health Alterations **10543185** **3 Credits**
This course elaborates upon the basic concepts of health and illness as presented in Nursing Fundamentals. It applies theories of nursing in the care of patients through the lifespan, utilizing problem solving and critical thinking. This course will provide an opportunity to study conditions affecting different body systems and apply evidence-based nursing interventions. It will also introduce concepts of leadership and management.

Military Medic RN Health Promotions 10543186 2 Credits
This course focuses on topics related to health promotion for individuals and families throughout the lifespan. We will cover nursing care of the developing family, which includes reproductive issues, pregnancy, labor and delivery, post-partum, the newborn, and the child. An emphasis is placed on teaching and supporting healthy lifestyles choices for individuals of all ages. Nutrition, exercise, stress management, empowerment, and risk reduction practices are highlighted. Study of the family will cover dynamics, functions, discipline styles, and stages of development.

Military Medic RN Skills Theory 10543182 2 Credits
This course focuses on the integration of basic nursing fundamentals and pharmacology nursing concepts to provide evidenced-based care to diverse patient populations across the lifespan.

Military Medic RN Transition to Prof. 10543184 1 Credits
This course is designed to facilitate the transition of military health care veterans into the professional nurse role. Topics include: introduction to the healthcare delivery system, nursing roles within the healthcare delivery system; communication and collaboration with other members of the health care team. In addition to the exploration of the nursing process, documentation, safety, legal, ethical issues and information technology. The patient-needs framework of the curriculum, and nursing process will be explored.

Military Medic Rn Fundamentals and Pharm 10543181 2 Credits
This course focuses on the integration of basic nursing fundamentals and pharmacology nursing concepts to provide evidenced-based care to diverse patient populations across the lifespan.

Milling Operations 1 10420205 1 Credits
Requires the learner to identify vertical milling machine components, identify tools and tool holding accessories, verify alignment of machine components, and apply machining theory principles to fundamental vertical milling operations.

Milling Operations 2 10420206 1 Credits
Requires the learner to apply appropriate machining theory principles and progressive machining skills to operate vertical milling machines according to industry standards.

Milling Operations 3 10420207 1 Credits
Requires the learner to combine multiple machining processes with vertical milling components and accessories to machine specific features of a work piece.

Mobile Applications Development 10152185 3 Credits
In this class students will explore mobile application development using the Android operating system. The topics will include various aspects of the Android platform, including application design, data persistence, and user interface design. Java will be the primary language used in the course, and students will make heavy use of object-oriented programming principles to create an application of their own design.

Motors and Drives 10620120 2 Credits
This course expands knowledge of motor controls and motor control systems. VFDs will be introduced and applied for control of a three phase motor. Positioning systems using both stepper and servo drives are explored. Application of industrial equipment is emphasized and students are required to use and interpret equipment manuals to control and integrate the equipment. Control of DC and single phase motors are also introduced.

Music Appreciation 20805227 3 Credits
Through an examination of select contemporary musical styles and a survey of the development of Western music, students will learn how to actively listen to music and identify salient traits. Students will explore musical meaning, musical reception, and musical aesthetics as they apply to different cultures and different time periods.

Native American History 20803214 3 Credits
Introductory course focusing on Native American history from the pre-Columbian era to the present. Topics include origins, cultures and spirituality, economics, interactions with Euro-Americans and the US government (including removal and assimilation), alliances and rivalries, military strategies, native leadership, and tribal sovereignty. Explores the connections between native history and current affairs, with emphasis on native voices.

Network Security 1 10150118 3 Credits
Provides an understanding of information security management and technical components of security. The material covers the history and terminology of security and an overview of how to manage an information security program. Topics include legal and ethical issues, risk management, security design (logical and physical) and maintenance. Case studies and hands-on scenarios provide students with opportunities to create solutions to security issues.

Network Security 2 10150119 3 Credits
Provides hands-on training and exposure to information security management techniques and information assurance tools. Students will complete lab and project-based activities enabling them to defend systems, networks, and applications against practical and viable computing threats. Students will also learn countermeasures for defending the network infrastructure through real-life situational training exercises. Topics include intrusion detection and prevention systems (IDS/IPS), firewalls, log collection, e-Discovery/forensics, incident response, anomaly detection, content filtering, system hardening, malware analysis, and encryption.

Network Service and Support 10150198 3 Credits
Students apply the skills and techniques of an information technology (IT) professional supporting an IT installation. IT technology is constantly changing. Students learn how to keep current on IT trends, supporting, exploring, selecting and implementing IT changes. The course uses a variety of tools, exploring the use of project management techniques and software, investigates the status of current and future IT emerging technologies, and implements a VoIP strategy.

Nsg: Complex Health Alterat 2 **10543113** **3 Credits**
Complex Health Alterations II prepares the learner to expand knowledge and skills from previous courses in caring for clients across the lifespan with alterations in the immune, neuro sensory, musculoskeletal, gastrointestinal, hepatobiliary, renal / urinary and the reproductive systems. The learner will also focus on management of care for clients with high risk perinatal conditions, high risk newborns and the ill child. Synthesis and application of previously learned concepts will be evident in the management of clients with critical life threatening situations.

Nursing Advanced Clinical Practice **10543115** **3 Credits**
This advanced clinical course requires the student to integrate concepts from all previous courses in the management of groups of clients facing complex health alterations. Students will have the opportunity to further develop critical thinking skills using the nursing process in making clinical decisions. Continuity of care through interdisciplinary collaboration is emphasized.

Nursing Advanced Skills **10543112** **1 Credits**
This course focuses on the development of advanced clinical skills. Content includes advanced IV skills, blood product administration, chest tube systems, basic EKG interpretation and nasogastric / feeding tube insertion.

Nursing Assistant **30543300** **2 Credits**
The Nursing Assistant program prepares students for employment as nursing assistants and for other health-related programs. During the 81-hour course, students will be required to demonstrate skills including: communication, basic nursing and personal care, attention to client's rights, and care of clients with dementias. The program is recognized by the Wisconsin Department of Health Services. Upon successful completion of the program, the student is eligible to take the Wisconsin Nursing Assistant competency evaluation for inclusion on the Wisconsin Nurse Aide Registry and for employment in various health care facilities such as nursing homes, hospitals, home health agencies, CBRFs, etc.

Nursing Clinical Care Across the Lifespa **10543107** **2 Credits**
This clinical experience applies nursing concepts and therapeutic interventions to clients across the lifespan. It also provides an introduction to concepts of teaching and learning. Extending care to include the family is emphasized.

Nursing Clinical Transition **10543116** **2 Credits**
This clinical experience integrates all knowledge learned in the previous courses in transitioning the role of the graduate nurse. The course promotes relatively independent clinical decision, delegation, and works collaboration to achieve client and organizational outcomes. Continued professional developments fostered.

Nursing Complex Health Alterations I **10543109** **3 Credits**
Complex Health Alterations I prepares the learner to expand knowledge from previous courses in caring for clients across the lifespan with alterations in cardiovascular, respiratory, endocrine, and hematologic systems as well as clients with fluid / electrolyte and acid base imbalance, and alterations in comfort.

Nursing Fundamentals **10543101** **2 Credits**
This course focuses on basic nursing concepts that the beginning nurse will need to provide care to diverse patient populations across the lifespan. Current and historical issues impacting nursing will be explored within the scope of nursing practice. The nursing process will be introduced as a framework for organizing the care of patients with alterations in cognition, elimination, comfort, grief / loss, mobility, integument, and fluid / electrolyte balance.

Nursing Health Alterations **10543105** **3 Credits**
This course elaborates upon the basic concepts of health and illness as presented in Nursing Fundamentals. It applies theories of nursing in the care of clients through the lifespan, utilizing problem solving and critical thinking. This course will provide an opportunity to study conditions affecting different body systems and apply therapeutic nursing interventions. If will also introduce concepts of leadership and management.

Nursing Health Promotion **10543106** **3 Credits**
This course focuses on topics related to health promotion for individuals and families. We will cover nursing care of the developing family, which includes reproductive issues, pregnancy, labor and delivery, post partum, the newborn, and the child. Recognizing the spectrum of health families we will discern patterns associated with adaptive and maladaptive behaviors applying mental health principles. An emphasis is placed on teaching and supporting healthy lifestyle choices for individuals of all ages. Nutrition, exercise, stress management, empowerment and risk reduction practices are highlighted. Study of the family will cover dynamics, functions, discipline styles, and stages of development.

Nursing Intermediate Clinical Practice **10543111** **3 Credits**
This intermediate level clinical course develops the Registered Nurse (RN) role when working with clients with complex health care needs. A focus of the course is developing skills needed for managing multiple clients and priorities. Using the nursing process students will gain experience in adapting nursing practice to meet the needs of clients with diverse needs and backgrounds.

Nursing Intro Clinical Practice **10543104** **2 Credits**
This introductory clinical course emphasizes basic nursing skills and application of the nursing process in meeting the needs of diverse clients across the lifespan. Emphasis is placed on performing basic nursing skills, the formation of nurse- client relationships, communication, data collection, documentation, and medication administration.

Nursing Management & Professional Concep **10543114 2 Credits**
This course covers nursing management and professional issues related to the role of the Registered Nurse (RN). Emphasis is placed on preparing for the RN practice.

Nursing Pharmacology **10543103** **2 Credits**
This course introduces the principles of pharmacology, including drug classifications and their effects on the body. Emphasis is on the use of the components of the nursing process when administering medications.

Nursing Skills **10543102** **3 Credits**
This course focuses on development of clinical skills and physical assessment across the lifespan. Content includes mathematic calculations and conversions related to clinical skills, blood pressure assessment, aseptic technique, wound care, oxygen administration, tracheotomy care, suctioning, management of enteral tubes, basic medication administration, glucose testing, enemas, ostomy care, and catheterization. In addition, the course includes techniques related to obtaining a health history and basic physical assessment skills using a body systems approach.

OSHA for Woods **10410101** **1 Credits**
In this course students will study the following: Introduction to OSHA, Focus Four Hazard Fall protection, Struck-by hazards, Caught-in or between hazards, Electrocution hazards, Personal protective and life-saving equipment, health hazards in construction, scaffolds and ladders, and other construction related safety concerns.

OT Pediatric Practice **10514190** **4 Credits**
Explores interventions relative to major pediatric diagnoses seen in OT practice. Evaluation, treatment interventions, assistive technology and documentation are emphasized within the context of the child's occupations.

OT Performance Skills **10514174** **4 Credits**
Emphasis on the development of skills related to assessment and intervention in the areas of sensory, motor, cognition and communication.

OT Phys Rehab Practice **10514189** **4 Credits**
Explores interventions relative to major physical disability diagnoses seen in OT practice. Evaluation, treatment interventions, , assistive technology and documentation are emphasized relative to the biomechanical, neurodevelopmental and rehabilitative approaches to practice.

OT Theory and Practice **10514176** **3 Credits**
Examines the theoretical foundations that guide Occupational Therapy (OT) practice. Apply group dynamics and demonstrate leadership skills.

OTA Fieldwork I **10514184** **2 Credits**
Integrate classroom theory and practice into a Fieldwork Level 1 experience. Provides experiences to assist in the development of communication, professional and observational skills.

OTA Fieldwork IIA **10514186** **5 Credits**
Develop skills and behaviors necessary for entry level occupational therapy assistant practice. Provides a different clinical practice setting than Fieldwork II- B.

OTA Fieldwork IIB **10514187** **5 Credits**
Develop skills and behaviors necessary for entry level occupational therapy assistant practice. Provides a different clinical practice setting than Fieldwork II- A.

OTA Practice and Management **10514185** **2 Credits**
Provides opportunities to practice clinical management skills, continuous quality improvement measurement, and administrative concepts and procedures. Students create a professional development plan.

On-Site Biomedical Clinical Experience 1 **10605203** **3 Credits**
The focus of this course is to practice typical HTM/BMET job tasks in a real or simulated clinical environment while furthering the knowledge base related to medical equipment. Laboratory sessions occur primarily in an actual or simulated hospital environment accomplishing preventative maintenance inspections and procedures which could include inspection, functional verification, maintenance procedures, calibration, industry standard documentation, and troubleshooting/repair. Manufacturer's manuals or technician/instructor guidance are utilized. Also, clinical environments are investigated, job search skills are practiced, and requirements for internship placement are accomplished.

Operations Management **10102131** **3 Credits**
Students will learn the skills and tools necessary to contend with problems facing management, with special emphasis on business processes, forecasting, and inventory management. Application of learning through problem solving will be emphasized.

Oral/Interpersonal Comm **10801196** **3 Credits**
Focuses upon developing speaking, nonverbal communication, and listening skills through individual speeches, group activities, and other projects.

Ordinary Differential Equations **20804255** **4 Credits**
Techniques in Ordinary Differential Equations is designed for students of mathematics, science, and engineering. This course presents techniques for solving and approximating solutions to ordinary differential equations. Topics will include solving first order differential equations, solving second and higher-order linear differential equations, Laplace and Fourier transforms, systems of first order linear differential equations, numerical methods, and Sturm-Liouville Theory.

Organizational Behavior **10102141** **3 Credits**
Students will study the dynamics of individual and team behaviors within the workplace. A variety of business structures and industries will be explored to gain additional insights into human behavior and organizational strategy. Effective business communication will be emphasized throughout the course.

Organizational Culture **10116120** **3 Credits**
Organizational culture examines employee engagement in the workplace in an effort to improve overall employee morale and provide a positive work culture.¬† Generational issues, DEI concepts, and change management will also be explored.

Organizational Development **10196168** **3 Credits**
Learners apply skills and tools necessary to deal with organization behavior and change. Learners apply intervention strategies to deal with diversity, restructuring, globalization, team building, confict resolution and process consultation. Learners analyze how an organization's goals, decision-making, performance management and planning impact goal attainment, business outcomes, organizational structure, job design and employee participation.

Ornamental Plant Health Care **10001113** **3 Credits**
The identification of and control of insects and diseases, with a focus on plant health care and maintenance will be emphasized in this course. An integrated pest management approach in diagnosing pest problems and the control of pests both natural and cultural. Physical and chemical applications will be included. Calibrations, laws, regulations, safety and ecological impact are also covered. Training and testing for the Wisconsin Commercial Pesticide Applicator Exam, Category 3.0 Landscape and Turf is part of this course.

Overview of Criminal Justice **30504503** **1 Credits**
Through classroom lecture and WI Department of Justice 720 Academy integration exercises, students will learn and apply skills addressed in the following WI Department of Justice 720 Academy Phase I curriculum framework topics: Academy Orientation, Fundamentals of Criminal Justice, Ethics, Cultural Competency, Agency Policy, and Professional Communication.

Overview of Investigations **30504506** **2 Credits**
Through classroom lecture, on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Department of Justice 720 Academy curriculum framework Phase I topics: Constitutional Law I, Crimes I, Interviews, and Report Writing. The DOJ Phase I Written Examination will be administered in this course.

Overview of Patrol Response **30504500** **2 Credits**
Through classroom lecture, and on-campus lab, and WI Department of Justice integration exercises students will learn and apply skills addressed in the following WI Department of Justice 720 Academy curriculum framework Phase I topics: Critical Thinking and Decision-Making, Basic Response (RESPOND), Radio Procedures, Introduction to TraCS, Traffic Law Enforcement, and First Aid/CPR/AED. This course will also include the WI DOJ 720 Academy Integration Exercises.

Overview of Tactics **30504510** **1 Credits**
Through classroom lecture, and on-campus lab and WI Department of Justice 720 Academy integration exercises, students will learn and apply skills addressed in the following Department of Justice 720 Academy curriculum framework Phase I topics: Fundamentals of Firearms, Vehicle Contacts I, Officer Wellness, and DAAT.

PARAMEDIC RESPIRATORY MGT. **10531915** **2 Credits**
This course teaches the paramedic student to integrate complex knowledge of anatomy, physiology, and pathophysiology into the assessment to develop and implement a treatment plan with the goal of assuring a patent airway, adequate mechanical ventilation, and respiration for patients of all ages. Specific knowledge pertaining to the respiratory system is also provided to ensure the student is prepared to formulate a field impression and implement a comprehensive treatment plan for a patient with a respiratory complaint.

PLC Applications **10620158** **2 Credits**
This course will cover fundamental PLC hardware and wiring. This course includes PLC CPU, discrete and analog input/output modules, and circuit wiring with basic industrial control devices hardwired to the PLC modules. Additionally, programming an address-based touch screen and interface it with a PLC will be completed. Interfacing between personal computers, PLCs, and touch screen panels along with drivers, will be applied.

PLC Fundamentals **10620137** **3 Credits**
This course will cover fundamental PLC programming, hardware, and wiring. This course includes PLC CPU, discrete and analog input/output modules, and circuit wiring with basic industrial control devices hardwired to the PLC modules. Additionally, programming an address-based touch screen and interfacing it with a PLC will be completed. Interfacing between personal computers, PLCs, and other automation devices will be addressed.

PTA Applied Kinesiology 1 **10524156** **4 Credits**
Introduces basic principles of musculoskeletal anatomy, kinematics, and clinical assessment. Students locate and identify muscles, joints, and other landmarks of the lower quadrant in addition to assessing range of motion and strength.

PTA Applied Kinesiology 2 **10524157** **3 Credits**
Applies basic principles from PTA Kinesiology 1 to the axial skeleton and upper quadrant including location and identification of muscles, joints and other landmarks. Assess range of motion and strength of the axial skeleton and upper quadrant. Integrate analysis of posture and gait.

PTA Biophysical Agents **10524143** **4 Credits**
Develops the knowledge and technical skills necessary to perform various biophysical agents likely to be used by a PTA.

PTA Cardio & Integ Mgmt **10524146** **3 Credits**
Integrates concepts of cardiopulmonary and integumentary pathologies, physical therapy interventions, and data collection in patient treatment.

PTA Clinical Practice 1 **10524147** **2 Credits**
Provides a part time clinical experience to apply foundational elements, knowledge, and technical skills pertinent to physical therapy practice.

PTA Clinical Practice 2 **10524148** **3 Credits**
Provides another part time clinical experience to apply foundational elements, knowledge, and technical skills required of the entry level physical therapist assistant in various practice settings.

PTA Clinical Practice 3 **10524151** **5 Credits**
Provides a full time clinical experience to apply foundational elements, knowledge, and technical skills required of the entry level physical therapist assistant in various practice settings.

PTA Patient Interventions **10524139** **4 Credits**
An introduction to basic skills and physical therapy interventions performed by the physical therapist assistant.

PTA Princ of Musculo Rehab **10524145** **4 Credits**
Integrates concepts of musculoskeletal pathologies, physical therapy interventions, and data collection in patient treatment.

PTA Princ of Neuro Rehab **10524144** **4 Credits**
Integrates concepts of neuromuscular pathologies, physical therapy interventions, and data collection in patient treatment.

PTA Professional Issues 1 **10524140** **2 Credits**
Introduces the history and development of physical therapy profession, legal and ethical issues, the interdisciplinary health care team, and professional communication skills.

PTA Professional Issues 2 **10524150** **2 Credits**
Incorporates professional development, advanced legal and ethical issues, healthcare management and administration, and further development of professional communication strategies.

PTA Rehab Across the Lifespan **10524149** **2 Credits**
A capstone course that integrates concepts of pathology, physical therapy interventions and data collection across the lifespan. In addition, the Physical Therapists Assistant's (PTA's) role in health, wellness and prevention; reintegration, and physical therapy interventions for special patient populations will be addressed.

PTA Therapeutic Exercise **10524142** **3 Credits**
Provides instruction on the implementation of a variety of therapeutic exercise principles. Learners implement, educate, adapt, and assess responses to therapeutic exercises.

PV Design and Install 1 **10480113** **2 Credits**
This course is designed to provide students with a foundational understanding of Photovoltaic (PV) systems and their integration within the broader context of the energy industry. Students will be equipped with the knowledge and skills necessary for designing and installing photovoltaic systems in residential and commercial settings.

PV Design and Install 2 **10480114** **2 Credits**
Building upon the foundational knowledge gained in the PV Design and Installation 1 course, this advanced course takes a hands-on approach to immerse students in real-world PV installation scenarios. Through a combination of classroom instruction, practical exercises, and on-the-job training, students will deepen their understanding of PV systems and develop the skills necessary for successful installations.

PV Operations & Maintenance **10481119** **2 Credits**
Solar photovoltaic (PV) operations and maintenance (O&M) is a course that covers the principles and practices of maintaining and troubleshooting PV systems. The course will cover topics such as how to perform routine maintenance on PV systems, how to troubleshoot common problems, and how to repair or replace faulty components. Students will also learn about safety measures to take when working on PV systems, as well as industry standards and best practices for O&M.

Paralegal Internship/Field St **10110143** **3 Credits**
Paralegal majors will be responsible for finding law-related employment and working for the required amount of hours in order to gain occupational experience.

Paramedic Cardiology **10531916** **4 Credits**
This course teaches the paramedic student to integrate assessment findings with principles of cardiovascular anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a cardiovascular complaint.

Paramedic Medical Principles **10531912** **4 Credits**
This course addresses the complex depth of anatomy, physiology, and pathophysiology of major human systems while also introducing the paramedic students to the topics of shock, immunology, and bleeding.

Paramedic Portfolio 1 **10531931** **2 Credits**
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in simulation or in the health care environment. The experiences will be in simulation or with actual patients under the supervision of instructors or approved preceptors. Students will also participate in formal high-fidelity human patient simulator experiences and assessment as a part of this course.

Paramedic Portfolio 2 **10531932** **2 Credits**
This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in simulation or in the health care environment. The experiences will be in simulation or with actual patients under the supervision of instructors or approved preceptors. Students will also participate in formal high-fidelity human patient simulator experiences and assessment as a part of this course.

Paramedic Trauma **10531920** **3 Credits**
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for an acutely injured patient.

Paramedic to ADN Clinical **10543129** **2 Credits**
Introductory clinical emphasizes basic nursing skills and application of nursing process to clients and families across the lifespan. Emphasis placed on assessment, relationships, communication, data collection, documentation, and medication administration.

Paramedic to ADN Skills **10543130** **2 Credits**
Basic nursing skills and physical assessment across the lifespan. Includes medication calculations, aseptic technique, wound care, tracheostomy care, suctioning, management of enteral tubes, medication administration, enemas, ostomy care, and catherization.

Paramedic to ADN Theory 1 **10543127** **3 Credits**
Nursing process implemented to relate care of patients throughout the lifespan with alterations in cognition, elimination, comfort, grief/loss, mobility, skin integrity, and fluid/electrolyte balance and related principles of pharmacology.

Paramedic to ADN Theory 2 **10543128** **3 Credits**
Nursing care of the developing family, including reproductive and mental health issues, pregnancy, labor and delivery, post-partum, the newborn, and child. Integrated understanding of related pharmacology. Study of family dynamics and grief/loss.

Parametric Design 1 **10606115** **3 Credits**
This course is designed to introduce students to the concepts, commands, and techniques of parametric modeling. The student will construct intelligent solid models, create and constrain assemblies and create 2D drawings, balloons, parts lists and reference dimensions from the 3D models.

Parametric Design 2 **10606133** **4 Credits**
Students will learn how to select and model drive systems including gears, chain drives, belt drives, and cams. Advanced software topics such as presentation files, using parameters to creating I-parts; derived parts and adaptivity will also be covered. We will also cover manufacturing requirements for castings, machined parts, sheet metal and welding. Correct drawing layout and annotation will be emphasized for detail and assembly drawings.

Payroll Accounting **10101130** **3 Credits**
The course covers the basic rules and methods of calculating payroll. A further study of the rules and regulations governing employer/employee payroll are studied. The various federal and state forms are examined and completed. Proper and timely reporting of payroll is discussed. The student completes a manual and computerized payroll project. An understanding of debits and credits is highly recommended.

Personal Brand **10104183** **2 Credits**
This course is designed to familiarize yourself with your digital trail, find ways to shape and build it, and prepare you for entry into the workplace. Online search strategies, vision boards, a career planning guide, Student Employment Services, networking, researching current marketing jobs, current readings, and members of the business community will be used. Additionally, effective job entry preparations such as competitive resumes, cover letters, applications, thank you letters, various types of interviewing, job searches, appropriate business professional dress, and portfolios will be addressed.

Personal Brand Management **10104182** **3 Credits**
This course is designed to familiarize yourself with your digital trail, find ways to shape and build it, and prepare you for entry into the workplace. Online search strategies, vision boards, a career planning guide, Student Employment Services, networking, researching current marketing jobs, current readings, and members of the business community will be used. Additionally, effective job entry preparations such as competitive resumes, cover letters, applications, thank you letters, various types of interviewing, job searches, appropriate business professional dress, and portfolios will be addressed.

Personal Brand Management for Designers **10304151** **2 Credits**
An in depth look at understanding our personal brand through exploration of characteristics, skills, and strengths, which are then illustrated through our portfolio, resume, and social media narratives. Employment possibilities in design are discussed.

Personal Insurance Tax Estate Planning **10114122** **1 Credits**
The learner will explore the various types and importance of automobile, life, and health and disability insurance. The course reviews the income tax system and its relevance in financial planning. Estate planning techniques are also explored.

Personal Investing **10114123** **1 Credits**
Students will review the basics of personal investing. Bonds, stocks, and mutual funds will be evaluated as part of a personal investment plan. Various tools of retirement planning will be explored, including 401(K)'s, 403(B)'s, and IRA's.

Personal Leadership Strategies **10196164** **3 Credits**
The learner applies the skills and tools necessary to deal with the time management, stress, and related challenges to a supervisor. Each learner will demonstrate the application of time management techniques, personal planning, continuous learning, valuing rights and responsibilities of others, effective communication, assertiveness, and dealing effectively with stress.

Personal Money Management and Loans **10114121** **1 Credits**
This course will focus on helping students understand how to manage their money through budgeting, and realizing the importance of saving for the future. Students will explore various types of savings and checking accounts. They will examine consumer credit and various housing options.

Personal and Professional Development **10106103** **3 Credits**
Students will develop strategies to enhance success in college and in an office professional career. These skills include self-assessment, interpersonal skills, problem solving, time management, study skills, learning styles, communication skills, and critical thinking. This course will make students aware of the resources available to them as a student. Additionally, student will learn introductory level of presentation software.

Pest Management Principles **10006120** **3 Credits**
The student will learn and develop skills, practices, and principles of identifying and managing pests that are a problem for a variety of common regionally grown agricultural crops. The student will learn control measures and application; proper use and safety measures; how to identify insects, weeds, and diseases in crops; various stages of growth related to timeliness of treatment; and methods of applying control measures. The student will learn principles to follow regarding the different ways of crop scouting.

Pharm for Allied Health **31509308** **2 Credits**
Introduces students to medication classification and basic pharmacology principles. Students apply basic pharmacodynamics to identify common medications and calculate dosages in preparation for medication administration.

Philosophy of Leadership **20890267** **3 Credits**
Using the Phi Theta Kappa Leadership Development Program curriculum, this course explores the concept of leadership. Through experiential exercises, the study of films, and readings from the humanities, participants will develop a personal philosophy of leadership, an awareness of moral and ethical responsibilities of leadership, and an awareness of one's own style of leadership.

Philosophy of the Arts **20809265** **3 Credits**
In this course we will examine some of the traditional aesthetic theories and some contemporary debates within the philosophy of art. We will ask crucial questions about the philosophy of beauty, art, and criticism. We will examine their histories, their arguments, and finally try to come up with our own understanding of each of these fields in an integrated whole. We will also use art experience to apply all of the various philosophies of art.

Phlebotomy **10513111** **2 Credits**
This course provides opportunities for learners to perform routine venipuncture, routine capillary puncture and special collection procedures.

Phlebotomy Skills & Experience **10513107** **3 Credits**
The phlebotomy certificate course prepares an individual for employment as a phlebotomist in a clinic or hospital. Students are trained to efficiently and safely obtain blood samples. The course consists of a combination of lecture, student laboratory, and clinical experience.

Photovoltaic Design & Installation 1 **10480111** **3 Credits**
Students learn the details involved in the mechanical and electrical integration of a PV system. Topics include system components, product specifications, product integration, racking system design capabilities and limits, system diagramming, configurations, safety, common design mistakes and solutions, installation techniques. This course will involve students in the installation of a photovoltaic system.

Photovoltaic Design & Installation 2 **10480112** **3 Credits**
Students in this capstone course design an integrated portfolio of energy systems, incorporating renewable energy options into a conventional system. Each learner will write a project proposal, work with project teams, sequence project tasks, develop project budgets, and identify project resources.

Physical Fitness **30504501** **1 Credits**
Through classroom lecture and on-campus lab students will apply Phases I-III Health Fitness WI Department of Justice 720 Academy curriculum framework program requirements and Officer Wellness Suicide Prevention.

Pipefitting for Mfg. Maintenance **10462105** **3 Credits**
This course will introduce students to basic pipe fitting skills and knowledge. Topics include: standard tools, materials, and fitting techniques used in manufacturing pipefitting applications. Upon completion, students should be able to demonstrate basic pipefitting aptitude.

Plumbing for Mfg Maintenance **10462106** **3 Credits**
This course introduces basic plumbing tools, materials, and fixtures. Topics include: standard tools, materials and fixtures used in plumbing systems and other related topics. Upon completion, students should be able to demonstrate an understanding of basic plumbing systems.

Police Administration **10504834** **3 Credits**
This course provides an examination of police organization and administration. It emphasizes managerial theory, motivation, and provides guidance on the development of a competent and appropriate supervisory, managerial, and administrative style for the leadership of police personnel.

Police in America **10504828** **3 Credits**
This course provides an exploration of the history of American police, fundamental problems in policing, the career path of police officers, and an overview of police organizations from line officers to command staff.

Power BI **10103130** **2 Credits**
Utilize Power BI with dimensional modeling as a tool for business intelligence. Extract, transform, and load data from multiple sources. Create calculated columns and measures for use in simple visuals (in matrices, tables, and cards). Apply time intelligence functions and learn basic usage of common DAX commands.

Power Conversion Analysis **10663171** **3 Credits**
This course introduces single-phase and three-phase AC power system analysis and the basic principles of electromechanical energy conversion devices. Topics include three-phase circuit analysis; magnetic circuit analysis; theory, construction and operation of transformers; performance characteristics and analysis of common rotating AC and DC machines and their control. Concurrent laboratory work reinforces theoretical principles.

Pre-Algebra **10834109** **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. Prepares students for elementary algebra and subsequent algebra related courses.

Precision Ag Technologies **10006170** **2 Credits**
Precision Ag Technologies provides the student the opportunity to experience studies in agricultural precision technologies including bio-technologies, application industries, livestock equipment, precision farming, financial resource management, plant protection, sustainable agriculture, environmental impacts of agriculture, agricultural workforce, and agricultural production.

Precision Machining Capstone - Milling **10420227** **1 Credits**
Requires the learner to produce a complex part using student developed programs incorporating multiple milling processes.

Precision Machining Capstone - Turning **10420226** **1 Credits**
Requires the learner to produce a complex part using student developed programs incorporating multiple turning processes.

Predictive Analytics **10156105** **2 Credits**
Utilize the Pandas library in Python to enable more advanced data manipulation and analysis. Implement machine learning algorithms to classify new data and predict unknown values. Perform basic time series analysis.

Prep for Farm Bus Ana **30090345** **3 Credits**
This course will take the student through a step by step procedure to close out a complete year of farm business records. This course will emphasize tax planning, completing inputs to livestock and crop enterprises, and emphasizing cash and liability accuracy. A completed business and enterprise analysis will be the course focus. Students must be actively engaged in production agriculture to enroll in this course.

Prin of Commercial Baking **10314101** **3 Credits**
Principles of Commercial Baking will acquaint students with the wide array of small hand tools and major equipment used in bakery production while exploring the fundamentals of bakery science and ingredient identification, selection and storage. Students will also become skilled at measuring ingredients, following formulas, planning and organizing work more efficiently and understanding the basics of professionalism and work ethics as they apply to a commercial bakery.

Principles of Accounting 1 **10101101** **3 Credits**
This course introduces Generally Accepted Accounting Principles (GAAP). Using double-entry accounting, learners will study the accounting cycle for service businesses including the full accounting cycle and financial statement preparation.

Principles of Accounting 2 **10101121** **3 Credits**
This course introduces Generally Accepted Accounting Principles (GAAP). Using double-entry accounting, learners will study the accounting cycle for merchandising businesses including the full accounting cycle and financial statement preparation. Additionally, learners will study internal controls, bank reconciliations, accounts and notes receivable/payables and merchandise inventory.

Principles of Accounting 3 **10101131** **4 Credits**
This course presents basic concepts for partnerships and corporations. The learner will study accounting procedures for corporate stock, dividends, retained earnings, liabilities, investments, fixed assets, and periodic inventory.

Principles of Accounting 4 **10101141** **4 Credits**
Designed for Accounting majors to further develop understanding of accounting practices. This course includes an extensive application of generally accepted accounting principles (GAAP) and a study of relevant developments and pronouncements in accounting practices as they relate to ethics, budgets, preparation and interpretation of financial statements, and the valuation and presentation of accounting theories and concepts.

Principles of Design **10304120** **1 Credits**
An in-depth study in foundational principles and elements of design that form the conceptual basis from which to solve and evaluate design problems.

Principles of Emerg Svcs Sfty & Survival **10503192** **3 Credits**
This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services.

Principles of Emergency Services **10503191** **2 Credits**
Provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/service; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; and fire service nomenclature.

Principles of Emergency Vehicle Response **30504504** **2 Credits**
Through classroom lecture, and on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Department of Justice 720 Academy Phase II topics: Emergency Vehicle Operation and Control (EVOC) and Vehicle Contacts II.

Principles of Hospitality Management **10109101** **3 Credits**
Students will survey management theory and the field of hospitality. Emphasis will be placed on contextualizing organizing, planning, leading and controlling in the field of hospitality. Students will explore the origin of hospitality, its development, current scope and future trends.

Principles of Inside Sales **10104164** **3 Credits**
This course will focus on the tools, strategies and techniques of inside sales including: pre-call planning, prospecting and qualifying leads, developing value statements, the role of social media in the sales process and follow up. This course will place special emphasis on the hands on application of a Customer Relationship Management (CRM) system and other technologies.

Principles of Investigations **30504508** **1 Credits**
Through classroom lecture, and on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Phase II topics of the WI Department of Justice 720 Academy curriculum framework: Constitutional Law II, Physical Evidence Collections, and Crisis Management. The Phase II Written Exam will be given in this course.

Principles of Lean Manufacturing **10623228** **1 Credits**
Requires the learner to identify types of waste, develop a means of eliminating the wastes, and use a 5S approach to identify process improvement opportunities.

Principles of Macroeconomics **20809211** **3 Credits**
This course provides an introduction to basic economic principles with applications to current economic problems affecting the overall performance of a nation's economy. The course begins with an analysis of the role of markets and prices in an economy. Topics include the causes and consequences of unemployment, inflation, and economic growth; the role of money and banking in the economy; the role of government taxing and spending policies to correct market failure and stabilize the economy; the implications of budget deficits and the national debt; and the implications of an increasingly global economy. This course is designed to meet the need for college transfer credit.

Principles of Management **10102134** **3 Credits**
The learner will explore the role of effective management within organizations. Emphasis is placed on demonstrating an understanding of the four main categories of management responsibilities: planning, organizing, leading and controlling. Students will utilize a simulation and other classroom activities to practice these concepts.

Principles of Microeconomics **20809212** **3 Credits**
This course examines the behavior of individual decision makers, primarily consumers and firms. Topics include choices of how much to consume and to produce, the functioning of perfectly and imperfectly competitive markets, the conditions under which markets may fail, and arguments for and against government intervention. The student applies the fundamental tools of economics to real world problems.

Principles of Security **10504855** **1 Credits**
This course provides an overview of the history of the private security and crime prevention, and asset protection of private security. It explores the concepts of security techniques and access control equipment.

Principles of Sociology **20809203** **3 Credits**
Defines and examines the concepts and realities of social structure, culture, socialization, complex organizations, class, inequality, social groups and social change. Special emphasis is given to institutions such as the family, religion, education, politics, economics and the media.

Principles of Sustainability **10806112** **3 Credits**
Prepares the student to develop sustainable literacy, analyze the interconnections among the physical and biological sciences and environmental systems, summarize the effects of sustainability on health and well-being, analyze connections among social, economic and environmental systems, employ energy conservation strategies to reduce the use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal and recycling in the U.S., and analyze approaches used by your community to promote and implement sustainability.

Principles of Tactics **30504509** **5 Credits**
Through classroom lecture and on-campus lab and integration exercises, students will learn and apply skills addressed in the following Phase II topics from the Department of Justice 720 Academy curriculum frameworks including: Professional Communication Skills II, DAAT, Firearms II, Tactical Response, and a Tactical Emergency Casualty Care.

Process Control Systems **10620159** **3 Credits**
Introduces the concept of automatic process control on the technician level. Studies controller functions and effects such as proportional, integral and derivative and how different combinations of each cause controller outputs and inputs to respond in open and closed loops. Practices digital controller configuration and loop tuning for level, pressure, flow, and temperature.

Product Management **10104141** **3 Credits**
The student will develop a mastery of the basic principles and practices of current day marketing. Emphasis will be placed on decision making issues of managing product, price and placement strategies. Student will analyze the influence of the market, the competition, and learn how to develop and manage effective marketing programs.

Profession & CBET Prep **10605216** **1 Credits**
Students will prepare for a CBET (Certified Biomedical Equipment Technician) practice exam focusing on solidifying program knowledge base in electronics, codes/standards/safety practices, computers/networking, anatomy/physiology, medical equipment, communications, and HTM problem solving.

Professional Development Strategies **10196128** **3 Credits**
Students will develop personal and learning skills that will enhance their success in the Supervisory Management program. Students will learn program expectations, accelerated learning skills, and how to research, write and present information. The course will prepare learners to use Blackboard, the Internet and presentation software. Emphasis is placed on developing communication, team building and interpersonal skills. Students will put together a student success plan that includes a personal development plan, career goals, and a resume. Time management skills will also be developed to assist with balancing family, school, and work.

Professional Practice **10530196** **3 Credits**
Applies previously acquired skills and knowledge by means of clinical experiences in the technical procedures of health record systems and discussion of clinical situations. This is the first of a two semester sequence of supervised clinical experiences in health care facilities.

Professional Practices in Human Services **10520106** **3 Credits**
This course prepares students to enter a community field experience and the human services profession. Emphasis is placed on gaining a working knowledge of professional codes of ethics, social/ethical issues, and professional behavior. Students learn what to expect and how to prepare for field placement, credentialing, professional development, and work in the field.

Professional Profile Development **10102143** **3 Credits**
Prepares learners to use strategies to seek, obtain and retain employment. Learners develop a professional development plan, prepare a resume and cover letter, build a professional profile, network with business professionals, and prepare for career advancement. Students will prepare their own professional portfolio.

Professional and Leadership Development **10196129** **2 Credits**
Students will develop personal and learning skills that will enhance their success in the Leadership Development Program. The course is tailored to the unique demands of today's industries, providing students with the skills and mindset required to excel as leaders in modern workplaces. Students will be introduced to different learning styles and leadership styles to help them be academically and professionally successful.

Professionalism and Success **10104128** **3 Credits**
Students will learn a wide-range of strategies to enhance their professional success in careers in customer service and sales including: self-assessment, time management, multi-tasking, professional communication skills, stress management, career development, problem solving and business etiquette. Special attention will be paid to developing skills that will help students navigate the realities of the rapidly changing 21st Century workplace.

Programming for CNC Milling **10444223** **1 Credits**
Requires the learner to create G&M code programs manually for machining center.

Programming for CNC Turning **10444221** **1 Credits**
Requires the learner to create G&M code programs manually for CNC turning centers.

Programming for Integration **10152130** **3 Credits**
Introduces students to programming using the powerful Python language. Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development. Python is used in modern industry to support mission-critical applications. Students will write applications using Python and apply that to machine learning algorithms.

Programming in CAM for CNC Milling **10444224** **1 Credits**
Requires the learner to operate CNC machining center with programs created with CAM software.

Programming in CAM for CNC Turning **10444222** **1 Credits**
Requires the learner to operate CNC turning centers with programs created with CAM software.

Project Implementation **10102219** **2 Credits**
Students will learn how to effectively facilitate change management throughout a project and conduct a post-implementation assessment.

Project Investment Appraisal **10481113** **3 Credits**
Students will study the concepts of energy modeling, energy optimization, energy reduction strategies, and cost benefit analysis. They will research incentives, financial impacts of lighting retrofits, envelope improvements, and energy management plans. Students will also learn and apply the financial concepts of simple payback, internal rates of return and net present value. The software taught and applied in this course will include: Microsoft excel, REMrate, BEopt, and eQUEST.

Project Management **10196188** **3 Credits**
Learners explore the importance of project management in business environments. Learners create successful proposals and plan, schedule and budget for a project. Team leadership and communication are practiced. Microsoft Project assists them in monitoring the progress of the project, including the use of Gantt Charts, Program Evaluation and Review Technique (PERT) and Critical Path Method (CPM). Includes professional presentation of your project.

Project Management Principles **10104152** **3 Credits**
Introduces the project management process for successful completion of goals while managing constraints of scope, resources, costs and time. You will learn the steps to: Identify needs and create a project proposal; Create a project plan (using work breakdown structures, activities definitions and relationships); Create a schedule (using network diagrams, durations and dates); Identify critical path activities; Create a budget; Monitor the project's progress using Gantt charts; Modify the plan as needed. You will practice these steps for a project and participate in leadership, team building and communication activities to allow for successful teamwork in completing the project.

Promotion Principles **10104184** **3 Credits**
Students work in teams to select and research a company, brand, or business, create an institutional and event promotion campaign and buy efficient media in order to influence a data-defined market segment. The markets may be local, national, or global.

Psychosocial Practice **10514175** **3 Credits**
Examines the role of the Occupational Therapist (OT) in the service delivery to individuals affected by mental health conditions. Provides opportunity for development of skills related to the assessment and interventions of psychosocial needs.

Public Speaking **20810201** **3 Credits**
Includes theoretical examination of the process of communication, the role of speech in self-development, the nature of meaning and the art of persuasion. Provides practice in selecting speech topics, analyzing audiences, organizing speech content, improving speech delivery and critiquing speeches via presentation of informative and persuasive speeches. Several graded and nongraded small group discussions sharpen additional communicative skills.

Publication Design 1 **10201104** **3 Credits**
This is a basic course in the use of the page layout software InDesign. The student will learn to utilize basic tools and key commands, place text and images, apply typographical formats, use text styles, manipulate tabs, and control design elements to create various publication designs. Before beginning this course, you should have a working knowledge of your computer and its operating system.

Publication Design 2 **10201114** **3 Credits**
Publication Design 2 expands on the knowledge and skills learned in Publication Design 1. Students will make brochures, catalog spreads and multiple page documents, employing text styles, multiple master pages and complex tabs. Students will decide whether process color or spot color is the correct color model for different projects. This course will cover preparing a document for commercial printing, including gathering supportive materials and preparing a press-ready PDF.

Pumps and Gear Boxes **10620100** **2 Credits**
This course will introduce centrifugal pump systems and characterists along with gear box designs. Troubleshooting of common pump systems and gear boxes will explored. Additional pump systems will also be covered.

Python Programming **10152102** **2 Credits**
An introduction to the Python programming language. Work with python objects (including n-dimensional arrays), methods, basic visualizations, and user-defined functions. Connect to various data sources and create output files.

QA Lab Math **10513113** **1 Credits**
This course focuses on performing the mathematical calculations routinely used in laboratory settings. You will explore the concepts of quality control and quality assurance in the laboratory.

Quality Customer Service **10106106** **3 Credits**
This course addresses sensitivity in communicating with external and internal customers and understanding behavioral styles. Develop verbal and nonverbal communication skills, as well as understanding customer service in a diverse population. Emphasize teamwork, working relationships, and telephone skills.

Quantitative Reasoning **10804135** **3 Credits**
This course is intended to develop analytic reasoning and the ability to solve quantitative problems. Topics to be covered may include: construction & interpretation of graphs; descriptive statistics; geometry & spatial visualizations; math of finance; functions and modeling; probability; and logic. Appropriate use of units and dimensions, estimates, mathematical notation, and available technology will be emphasized throughout the course.

Quantitative Reasoning **20804211** **4 Credits**
This course is intended to develop analytic reasoning and the ability to solve quantitative problems. Topics to be covered may include: construction and interpretation of graphs; descriptive statistics; geometry and spatial visualizations; math of finance; functions and modeling; probability; and logic. Appropriate use of units and dimensions, estimates, mathematical notation and available technology will be emphasized throughout the course. Note: This course satisfies Part A of the Quantitative Reasoning requirement for the UW system and is intended for students who do not plan to take any further mathematics.

RN to EMT Transition **10531193** **2 Credits**
Completion of this training will allow a registered nurse to sit for the National Registry of EMTs Basic exam. Upon successful completion of this exam, State of Wisconsin EMT- Basic licensure may be obtained. This class includes didactic, skills practice, and ambulance ride along. Must have a Registered Nurse License and be current on CPR.

Race, Class, Gender **20809217** **3 Credits**
This introductory course examines ethnic, racial, religious and cultural origins of Americans. The course focuses on social interactions that contribute to the understanding of different groups in diverse settings. In addition to an analysis of majority/minority relations in a multicultural context, social class and gender will also be analyzed as systems of inequality and sources of cultural difference.

Radiation Protection and Biology **10526197** **3 Credits**
Prepares radiography students to protect themselves and others from exposure to radioactivity. Students examine the characteristics of radiation and how radiation affects cell biology. Students apply standards and guidelines for radiation exposure.

Radiographic Image Analysis **10526195** **2 Credits**
Prepares radiography students to analyze radiographic images for quality. Students apply quality control tests to determine the causes of image problems including equipment malfunctions and procedural errors.

Radiographic Imaging **10526159** **3 Credits**
Introduces radiography students to the process of creating radiographic images. Students determine the factors that affect image quality including contrast, density, and distortion.

Radiographic Pathology **10526189** **1 Credits**
Prepares radiography students to determine the basic radiographic manifestations of pathological conditions. Students classify trauma related to site, complications, and prognosis and locate the radiographic appearance of pathologies.

Radiographic Procedures 1 **10526149** **5 Credits**
Prepares radiography students to perform routine radiologic procedures on various parts of the body including the upper body, hip, pelvis and ankle. Students apply knowledge of human anatomy to position the patient correctly to achieve the desired result.

Radiographic Procedures 2 **10526191** **5 Credits**
Prepares radiography students to perform routine radiologic procedures on various parts of the body including the skull and spine. Students apply knowledge of human anatomy to position the patient correctly to achieve the desired result.

Radiography Clinical 1 **10526168** **2 Credits**
This beginning level clinical course prepares radiography students to perform radiologic procedures on patients with extensive supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. An emphasis of the course is the development of communication and critical thinking skills appropriate to the clinical setting.

Radiography Clinical 2 **10526192** **3 Credits**
This second level clinical course prepares radiography students to perform radiologic procedures on patients with extensive supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. An emphasis of the course is the development of communication and critical thinking skills appropriate to the clinical setting.

Radiography Clinical 3 **10526193** **3 Credits**
This third level clinical course prepares radiography students to perform radiologic procedures on patients with supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. An emphasis of the course is the demonstration of communication and critical thinking skills appropriate to the clinical setting.

Radiography Clinical 4 **10526199** **3 Credits**
This fourth level clinical course prepares radiography students to perform radiologic procedures on patients with supervision and direction. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. Students are encouraged to demonstrate independent judgment in the performance of clinical competencies.

Radiography Clinical 5 **10526190** **2 Credits**
This fifth level clinical course prepares radiography students to perform radiologic procedures on patients with some supervision. Students apply radiation protection and standard precautions in the production of radiographs in a health care setting while adhering to legal and ethical guidelines. Students are encouraged to demonstrate independent judgment in the performance of clinical competencies.

Radiography Clinical 6 **10526198** **2 Credits**
This final clinical course requires students to integrate and apply all knowledge learned in previous courses to the production of high quality radiographs in the clinical setting. Students apply radiation protection and standard precautions in the production of images in a health care setting while adhering to legal and ethical guidelines. Students are encouraged to demonstrate independent judgment in the performance of clinical competencies.

Rapid Prototyping **10664104** **2 Credits**
This course will introduce rapid prototyping as it relates to the prototype design of parts. Basic components will be designed and built using an additive process. The course will culminate in the design and manufacture of a robotic end effector that will manipulate a predetermined item.

Real Estate Law **10110110** **3 Credits**
This course provides students with knowledge of the substantive law of real property to enable the student to identify rights and responsibilities involved with real property ownership. In addition, the students learn how to draft basic legal documents involving real estate transfers and transactions.

Recruit & Selection Strategies **10116142** **3 Credits**
Students learn the importance of human capital and its impact on organizational success. The course provides the skills and tools necessary to hire and retain qualified employees. Strategies associated with selecting and developing of employees, including the practice of interviewing techniques will be emphasized.

Refrigeration Systems **10601114** **3 Credits**
This course will cover the principles and practices of designing, installing, and maintaining refrigerated systems for a variety of applications. Students will learn about the different types of refrigeration systems, the components and operation of refrigeration systems, and the safety and environmental considerations involved in their use. The course will also cover the maintenance and troubleshooting of refrigerated systems. Suitable for those interested in careers in air conditioning and refrigeration or anyone looking to understand the operation of refrigerated systems.

Relationship-Based Policing **10504852** **3 Credits**
This course provides an analysis of relationship-based policing and builds upon community-based policing philosophy of collaboration and mutual partnership to maintain quality of community life through proactive problem-solving techniques. It examines building trusting relationships by making a commitment to improve the overall well-being of community life.

Renewable Energy Overview **10480101** **3 Credits**
Students investigate the need for renewable energy systems and emerging careers in renewable energy. Students examine the basic design, function, cost and other considerations associated with various green energy systems, including solar photovoltaic, solar thermal, wind, geothermal and biomass. Students will also explore the production and use of alternative transportation fuels.

Requirements Documentation **10102213** **2 Credits**
Students will consolidate and document requirements, with the inclusion of process modeling. Project assumptions, constraints, and scope will be identified and compared to the requirements elicited.

Research Methods in Criminal Justice **10504856** **2 Credits**
This course provides an analysis of the various research (quantitative and qualitative) methodologies along with an assessment of their strengths and limitations on research practices within criminal justice.

Residential Blueprint Reading **31410329** **1 Credits**
In this course students will study various construction systems as they related to their drawings. Roof framing plans, stair construction from a section drawing, window schedules and catalogs, interior and exterior finishes, multifamily dwellings and code requirements for a residential structure will be referenced for related trade information.

Residential Cabinetmaking **31409323** **5 Credits**
This course introduces students to concepts that include stationary and portable woodworking equipment, operations, and safety. The lumber milling process, joinery used in woodworking, and general shop safety operations will be introduced and applied. These skills will lead into design concepts and construction methods used in residential cabinetmaking. Students will work with manufactured wood products, hardwoods, and hardware and will construct cabinet cases, doors, and drawers. Students will custom build the cabinets for a newly constructed home.

Residential Construction **31410358** **5 Credits**
In this course, students will construct a home on a building site in the City of La Crosse. On site tasks will include foundation prep, load bearing wall and floor system installation, exterior and interior wall construction, roof truss installation and roof finish, stair construction, and cornice construction. Students will apply on site safety techniques and scaffolding installation as part of their training.

Residential Design Studio **10304126** **3 Credits**
A study in the fundamental principles of the interior design process and its application to residential projects. Focus on project concept development and project synthesis using critical thinking with a strong metacognitive reinforcement of learning through sketching, drawing diagrams, and hand drafting techniques. Project kitchen and bath requirements follow NKBA guidelines.

Respiratory Airway Management **10515112** **2 Credits**
Provides a comprehensive exploration of airway management concepts and skills.

Respiratory Clinical 1 **10515175** **2 Credits**
Introduces Respiratory Therapy practice in the hospital setting. Includes the development of skills such as basic therapeutics, patient assessment, medical record review, safety practices, patient interaction, and communication. This course includes the complete program competency list. At the completion of this clinical, learners must demonstrate competence in a minimum of 5 (required and/or simulated) competencies. The instructor may identify specific competencies to be addressed during this clinical.

Respiratory Clinical 2 **10515178** **3 Credits**
Continued development of respiratory therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing and interpreting data to make appropriate modifications in patient care. This course includes the complete program competency list. At the completion of this clinical, learners must demonstrate competence in a minimum of 12 (required and / or simulated) competencies. The instructor may identify specific competencies to be addressed during this clinical. NOTE: Competencies with an R are required; competencies with an S are required, but may be simulated; competencies with an O are optional.

Respiratory Clinical 3 **10515179** **3 Credits**
Continued development of respiratory therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing and interpreting data to make appropriate modifications in patient care. This course includes the complete program competency list. At the completion of this clinical, learners must demonstrate competence in a minimum of 19 (required and / or simulated) competencies. The instructor may identify specific competencies to be addressed during this clinical. NOTE: Competencies with an R are required; competencies with an S are required but may be simulated; competencies with an O are optional.

Respiratory Clinical 4 **10515182** **3 Credits**
Continued development of respiratory therapy clinical skills including respiratory therapeutics. Focuses on monitoring, analyzing and interpreting data to make appropriate modifications in patient care. This course includes the complete program competency list. At the completion of this clinical, learners must demonstrate competence in a minimum of 26 (required and / or simulated) competencies. The instructor may identify specific competencies to be addressed during this clinical. NOTE: Competencies with an R are required; competencies with an S are required by may be simulated; competencies with an O are optional.

Respiratory Clinical 5 **10515183** **3 Credits**
Focuses on the completion of respiratory therapy competencies and transition to employment. This course includes the complete program competency list. At the completion of this clinical, learners must demonstrate competence in all of the required and required / simulated competencies. The instructor may identify specific competencies to be addressed during this clinical. NOTE: Competencies with an R are required; competencies with an S are required but may be simulated; competencies with an O are optional.

Respiratory Disease **10515176** **3 Credits**
Exploration of signs, symptoms, causes, progression, and treatment of obstructive, restrictive and infectious diseases or disorders of the body that affect the respiratory system.

Respiratory Life Support **10515113** **3 Credits**
Focuses on management of adult ventilatory support.

Respiratory Neo/Peds Care **10515180** **2 Credits**
Provides a comprehensive orientation to the field of neonatal and pediatric respiratory care to include fetal development, birth, neonatal physiology, pulmonary dynamics, abnormal cardiopulmonary conditions, diseases, noninvasive and invasive therapeutic interventions.

Respiratory Pharmacology **10515173** **3 Credits**
Examines basic pharmacology principles, drug dosage, and calculations. Medications for inhalation including mucolytics, bronchodilators, and anti inflammatories. Also includes cardiac drugs, anesthetic drugs, neuromuscular blockers, and antimicrobials.

Respiratory Survey **10515111** **3 Credits**
Examines the role of the Respiratory Therapist within the healthcare community. Reviews the ethical, legal, and regulatory principles that guide practice across diverse populations. Introductory patient assessment and critical thinking processes used in the development of respiratory care plans are explored.

Respiratory Therapeutics 1 **10515171** **3 Credits**
Introduces the topics of medical gas administration and humidity and aerosol therapy. The learner will apply physics, math and patient assessment concepts to oxygen aerosol and humidity therapy.

Respiratory Therapeutics 2 **10515172** **3 Credits**
Introduces therapeutic procedures including arterial puncture, bronchial hygiene, lung expansion therapy, and pulmonary rehabilitation.

Respiratory/Cardiac Physiology **10515174** **3 Credits**
Provides the student with an in-depth knowledge of the structure and function of the respiratory and circulatory systems necessary to function as a competent Respiratory Therapist.

Respiratory/Cardio Diagnostics **10515181** **3 Credits**
Advanced invasive and noninvasive diagnostic cardiopulmonary procedures including pulmonary function, hemodynamics and rescue medicine.

Retail Design Studio **10304128** **3 Credits**
Building on the skills gained from Residential Design Studio, students will incorporate store design and merchandising tactics on a range of retail projects.

Retail Sales Management **10104172** **3 Credits**
This course will focus on the information necessary to successfully operate a retail location including: strategic planning, competitor analysis, personnel management, inventory management, retail marketing, store layout and visual display design. It will also expand on the selling skills and techniques learned in Selling Principles.

Risk Management **10116162** **3 Credits**
Risk is the uncertainty of loss. Students learn how to protect business organizations from loss by applying the principles of risk management and insurance. Teams conduct evaluations of local organizations and develop risk management programs tailored to meet the specific needs of the organizations.

Robotic Maintenance **10620165** **2 Credits**
This course reinforces prior knowledge from previous robotics classes. An emphasis will be placed on Robot I/O, external I/O, and integrating the controller with other automation devices.

Robotic Welding Operation **10442110** **2 Credits**
Students will learn basic skills necessary to operate a robotic welder. This course touches upon safety, the fundamentals of a teach pendant and arc tool programming language, controls, positioning, commands, set-up, and recovery will be addressed. Students will be able to perform basic movements and perform simple welds upon completion and identify project applications.

Robotics Applications **10664105** **2 Credits**
This course reinforces prior knowledge from previous robotics classes. An emphasis will be placed on Robot I/O, external I/O, and integrating the controller with other automation devices.

SEO and Marketing Analytics **10104174** **3 Credits**
Is your online marketing working? How can you get a return on our investment? You will learn about marketing analytics software, how it works, how to set goals and then measure the effectiveness of the web tools in meeting those goals. You will learn how to interpret the analytics and adjust your online tools to better meet your goals.

Safeguarding and Safety Circuits **10664103** **2 Credits**
In this course, safeguarding principles to keep personnel safe will be examined including the use of guards, barriers, safety devices, and/or safe working conditions. Safety levels of machine safeguarding devices will be explored. Investigation of electromechanical devices designed expressly for the purpose of monitoring the integrity of a machine's safety system will be included. Additionally, safety switches, relays, and circuits are examined.

Safety in the Workplace **10196136** **3 Credits**
An introduction to safety and loss prevention in the workplace with an emphasis on the supervisor's responsibility for maintaining a safe, productive environment. Students will study safety concepts, hazard controls, developing safety and health programs, and federal and state mandated regulations.

Sales Team Management **10104165** **3 Credits**
This course will focus on the responsibility and functions of a sales manager including: an evaluation of various sales organizational structures, sales forecasting, budgeting, ethics in sales, and an overview of best practices in recruiting, selecting, testing and training salespeople. Special attention will be paid to retaining, compensating, and motivating sales teams.

Sanitation I **10317101** **1 Credits**
This course includes a complete study of food service sanitation, safe food handling practices, high standards of personal health and hygiene, and sanitation regulations and enforcement. ServSafe certification is a nationally recognized credential offered at the completion of the course and is required for program advancement.

Sanitation-Cert FS Mgr **10317110** **1 Credits**
Assists the student to meet Wisconsin HSS196 license code provision for a Certified Manager of Sanitation Practices in food preparation, service and storage. Content includes standards for personal hygiene, receiving and storage, preparation and service, temperature controls, quality assurance and environmental settings for food preparation and service. Students will take state-approved exam for restaurant sanitation certified manager status.

Scenario Assessment **30504511** **1 Credits**
Through on-campus lab, students will be evaluated on the skills learned and applied in Phases I-II-III: Final Scenarios

Scripting and Automation **10154107** **3 Credits**
This course provides the fundamental skills and knowledge required to effectively write scripts and automate processes for the Microsoft Windows operating system. The student will learn conventional command/terminal shell technologies and the pros/cons of graphic and command shells. Automation concepts will include data types, standard input/output and redirection, conditional constructs, loop constructs, and error handling. Scripting environments covered will include the Windows command shell and Windows PowerShell.

Security Administration **10504842** **3 Credits**
This course provides an examination of security organization and administration. It emphasizes managerial theory, motivation, and provides guidance on the development of a competent and appropriate supervisory, managerial, and administrative style for the leadership of security personnel.

Selling Principles **10104119** **3 Credits**
Selling is a part of a firm's marketing activity and is a professional business process. Topics included are identification of sales prospects, determination of client needs, after-sales customer support, legal and ethical obligations of sales professionals, development of oral and written communications for selling, analysis of organizational structure, and making a sales presentation.

Sensitive Crimes **30504505** **2 Credits**
Through classroom lecture, and on-campus lab and WI Department of Justice 720 Academy integration exercises, students will learn and apply skills addressed in the following Department of Justice 720 Academy curriculum framework Phase III topics: Domestics, Juvenile Law, Victims, Sexual Assault, and Child Maltreatment. The DOJ Phase III Written Examination will be administered in this course.

Siemens Control Systems **10620114** **2 Credits**
This class introduces the components and operations of Siemens PLCs and describes the functions and programming languages on these PLCs. It covers the communication between hardware components and discusses basic guidelines for PLC installation. The integration of a Siemens touch screen will be included. An overview of the STEP 7 Basic (TIA Portal) software used to configure and program Siemens devices will be investigated.

Site Design **10614152** **2 Credits**
The course covers the principles of site analysis, planning, and design as well as the regulatory, environmental, and social factors that influence site design decisions. Throughout the course, students will learn to evaluate the characteristics of a site, including topography, vegetation, circulation, and access. They will also study site planning concepts such as zoning regulations, land use, and building codes. Students will engage in a variety of site design exercises, including conceptual site planning, schematic site design, and site analysis.

Site Layout and Concrete **31410303** **1 Credits**
Students will be introduced to measuring and layout procedures and site development using surveying equipment such as digital theodolites, lasers, and total station. Concrete as a building material, foundation walls and footings, flatwork, and below grade foundation preparation will be studied as well.

Sketching & AutoCAD Level 1 **10606137** **2 Credits**
Autodesk AutoCAD is a powerful tool for manufacturing, architecture, and construction. Learn how to effectively leverage this diverse software! Topics include navigating the user interface, command bar and ViewCube, managing .dwg files, drawing and modifying objects, drawing with accuracy, reusing content, generating drawings and other output, along with many productivity tips for future engineers of any discipline. Although the focus is on developing technical drawing skills for mechanical engineering, upon completion of this course you will be able to confidently use AutoCAD for architecture, construction, landscaping, manufacturing, engineering, or product design.

Sketching & AutoCAD Level 2 **10606147** **2 Credits**
Learn to be proficient in your use of AutoCAD and recognize the most effective tool for the task. Topics include advanced drawing views, tolerancing, threads & fasteners, assembly drawings, and other ways to be a more effective AutoCAD user.

Social Media Strategies **10104109** **3 Credits**
Explore current and up-and-coming online platforms, applications, and tracking methods for social media and determine how they are revolutionizing the marketing landscape. You will set up social media accounts, learn basic terminology, and incorporate best practices into marketing strategies. You will learn which platforms fit best with an organization's strategic goals, how to integrate content across them, interpret the analytics, and tailor them to maximize results.

Social Problems **20809202** **3 Credits**
This course examines the major issues confronting society: economic and political change, nationalism, racial and ethnic relations, sexism, socioeconomic class, crime and justice, health and education, and family life. It discusses causes, effects, possible solutions and future trends. This course requires student participation in reading, writing and discussion.

Software Appl for Business **10154102** **3 Credits**
Introduces the student to Office 365 suite of products. This course includes software application basics and file management strategies to better organize, create, and maintain information to communicate in a business setting. Office 365 applications will be related to solving business problems, formatting business information, and creating business reports that integrates all features of Office 365.

Software Design 1 **10152170** **3 Credits**
This course is an introduction to programmatic problem solving using the C# language and the .NET framework. This course focuses on introducing the use of explicitly typed variables, data types, control structures, loops, and arrays. Object-oriented concepts such as inheritance, different access modifiers, and accessor and mutator methods will be emphasized. The emphasis of this course is to introduce programming fundamentals in problem solving and the tools and language features that are used to accomplish this.

Software Design 2 **10152172** **3 Credits**
This class further expands on building a foundation of programmatic thought and problem-solving using C# and the .NET framework. Further exploration of fundamental data structures and control structures are explored as well as more advanced features of object-oriented programming. Object-oriented concepts are built upon. Object-relational mapping is introduced via Entity Framework Core. Language features such as LINQ are introduced to further expand more advanced use of object-oriented programming, database interaction, and problem-solving.

Software Design 3 **10152174** **3 Credits**
This class focuses on the introduction and use of advanced features of object-oriented programming such as abstract classes, interfaces, error handling, and unit testing. Along with these new topics, previously learned topics are also solidified and applied in this course to be used in conjunction with the new topics such as how these concepts can be applied to other languages.

Software Design 4 **10152176** **3 Credits**
This course introduces using ASP.NET EF Core with an MVC flow to provide the server-side portion of a web application alongside the use of a front-end framework to build modern web applications. The course brings together the web programming, C# and .NET, and database skills that have been built in previous classes to bring all these concepts and skills together to allow students to be a modern web application developer using a relevant technology stack.

Soil Fertility & Nutrient Management **10006169** **2 Credits**
Course will cover the fundamental and applied principles and concepts of soil fertility and plant nutrition. Attention will be given to the nutrient requirements of the commonly produced agronomic crops of our area. Course will provide the student with the information necessary to plan and produce agronomic crops based on crop needs and available resources. Students will be able to interpret soil test reports and make recommendation based on given information for related crop plants. In-field activities will be used to effectively reinforce the material presented in class.

Soils Management **30090323** **3 Credits**
Students learn about the physical, chemical, nutrient and biological characteristics of soil. Students will be able to evaluate the effect of fertilizers, herbicide, pesticides and fungicides on soil as well as assess the role of organic matter and microbes in the soil. Instruction is provided on how to take and understand soil testing procedures and reports. Students will receive instruction to implement fertilizer recommendations using cost versus benefit analysis. All classes in the Farm Business and Production management program include instruction on financial analysis and management of the farming operation.

Solid Model Use in Manufacturing 1 **10606217** **1 Credits**
Requires the learner to develop fundamental solid modeling skills to create SolidWorks sketches and a parametric model.

Solid Model Use in Manufacturing 2 **10606218** **1 Credits**
Requires the learner to create a SolidWorks assembly and a SolidWorks drawing from parts and assemblies.

Solidworks **10606184** **2 Credits**
Introduction to Solid Works 3D parametric modeling software. Create 3D parts and use these 3D parts to create 3D assemblies and 2D drawings. Students will learn to preserve design intent using dimension-driven systems and geometric relationships.

Solution Analysis **10102217** **2 Credits**
Students will analyze elicited information to recommend a solution option. Emphasis will be placed on the student identifying appropriate costs and benefits, assessing the impact of a change, and conveying their recommended solution.

Solution Testing and Training **10102218** **2 Credits**
Students will assess organizational readiness by facilitating testing and training of the solution. Emphasis will be placed on test plan creation, execution, and facilitation; as well as the development of training plans.

Spanish 1 **20802211** **4 Credits**
For students beginning the study of Spanish. Emphasizes development of basic communicative skills through practice in listening, speaking, reading and writing. Stresses vocabulary and grammar to enhance students' ability to speak and write in Spanish. Study of customs and values provides an increased awareness of Spanish speaking cultures. On completion students are expected to participate in uncomplicated conversations on everyday topics.

Spanish 2 **20802212** **4 Credits**
Bienvenidos! Welcome! This communicative language class is designed for students who have completed one semester of college Spanish. Emphasis is placed on the continued development of more complex communicative skills through practice in listening, speaking, reading and writing. By the end of Spanish 2, you will acquire the listening, speaking, reading and writing skills necessary to handle simple everyday survival tasks in Spanish. You will also have a better understanding of and appreciation for people and cultures other than your own and an increased awareness of Spanish-speaking countries in the world.

Special Patient Populations **10531921** **3 Credits**
This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for patients with special needs. Gynecological emergencies, along with special considerations in trauma are also included within this course.

Speech **10801198** **3 Credits**
Explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course.

Spreadsheets for Healthcare **10160115** **3 Credits**
Students will build their knowledge of spreadsheet software by learning to enhance the formatting of healthcare related spreadsheets, creating formulas, and generating various charts.

Statics/Strength Of Materials **10606124** **4 Credits**
Statics: The study and analysis of forces and loading conditions applied to structures and mechanical devices. Strength of Materials: An introduction to methods used to determine internal stresses present in machine parts when subjected to various loading conditions. Topics include: simple stresses, centroids, moments of inertia, torsion, shear and bending stresses.

Steering and Suspensions **32404322** **3 Credits**
Develops the skills and knowledge needed to test, diagnose, repair, replace and adjust steering and suspension systems. Includes theory of wheel alignment with practical experience on computerized alignment equipment.

Strategies in Farm Sys Data Mt **30090327** **3 Credits**
This course will help the student focus on long term strategies necessary to maintain and enhance the farm business and personal future financial goals. The student will complete the year by developing an accurate, usable business analysis. Students must be actively engaged in production agriculture to enroll in this course.

Strategy Development **10102211** **3 Credits**
Students will learn how to identify and define business needs; while navigating diverse business structures. Project roles and responsibilities will be explored with an emphasis on effective communication within each level of the organization. The necessity of project vision, strategy, goals, objectives, and scope definition will also be examined.

Strengths Seminar **10890106** **1 Credits**
This course supports learners as they make the transition to college, as appropriate to their area of interest. Students will investigate their strengths to adopt successful academic habits, explore career goals, build digital literacy, navigate campus resources, and foster community, belonging, and wellness.

Strengths Seminar (Technical Diploma) **31890300** **1 Credits**
#NAME?

Strengths Seminar-Liberal Arts Transfer **20890200** **1 Credits**
This course supports learners as they make the transition to college, as appropriate to their area of interest. Students will investigate their strengths to adopt successful academic habits, explore career goals, build digital literacy, navigate campus resources, and foster community, belonging, and wellness. This version supports the liberal arts transfer programs.

Struct Analysis **10614135** **3 Credits**
This course is designed to introduce the principles of structural mechanics to architectural students at a technical level. Students will develop an understanding of the structural analysis process, materials and systems. Basic calculations will be performed for beam analysis, external and internal forces on beams and beam and column design.

Struct Draft Comm **10614134** **3 Credits**
This course guides intermediate architectural students through the interpretation process necessary to communicate the structural design of commercial buildings. Concrete foundation systems and components combined with steel and masonry structures will be studied. Students will employ engineering sketches, industry manuals, and AutoCAD along with the advanced steel detailing software SDS/2 as aids in preparing drawings and designing connections.

Struct Draft Res **10614124** **3 Credits**
This course enables beginning architectural students to understand load distribution and to coordinate structural building components within a residential structure. Foundation systems, framing design with dimensional lumber and engineered wood products, along with applicable codes will be examined. Load tables and member sizing software will be utilized to specify framing for use in computer generated structural plans and details of a residence.

Structural Concepts **10614130** **2 Credits**
This course introduces the fundamental concepts of structural design in architecture. Students will learn about the principles of mechanics, materials, and structural systems, as they relate to the design and construction of buildings. Throughout the course students will analyze the behavior of structures and how to design safe, efficient, and aesthetically pleasing buildings.

Study Abroad Experience **20890206** **2 Credits**
This course includes pre-travel preparation, international travel, and post-travel reflection activities designed to strengthen cultural competence and global awareness.

Substantive Criminal Law **10504823** **3 Credits**
This course provides an examination of crimes. Numerous crimes and defenses are analyzed. Utilization and interpretation of criminal statutes is explored to develop requisite entry level practitioner understanding and abilities.

Supervision **10196191** **3 Credits**
The learner applies the skills and tools necessary to perform the functions of a frontline leader. Each learner will demonstrate the application of strategies and transition to a contemporary supervisory role including day-to-day operations, analysis, delegation, controlling, staffing, leadership, problem-solving, team skills, motivation, and training.

Surface Grinding **10420211** **1 Credits**
Requires the learner to operate the manual surface grinder and implement various surface grinding processes. Students should complete this course after Milling Operations 3.

Surgical Interventions 1 **10512131** **4 Credits**
Provides the foundational knowledge of surgical core and specialty procedures. Examines the pathophysiology, diagnostic interventions, health sciences, and surgical techniques for a variety of procedures.

Surgical Interventions II **10512142** **4 Credits**
Expands knowledge of core and specialty procedures by incorporating pathophysiology, diagnostic interventions, health sciences, and surgical techniques.

Surgical Pharmacology **10512129** **2 Credits**
Basic study of drug classifications, care, and handling of drugs and solutions, application of mathematical principles in dosage calculations, terminology related to pharmacology, anesthesia, and drugs used in surgery.

Surgical Skills Application **10512130** **2 Credits**
Provides a transition from the academic to the clinical setting. Learners integrate the surgical technologist skills as they apply to various surgical procedures.

Surgical Tech Fundamentals 1 **10512126** **4 Credits**
Focuses on preparing the patient and operating room for surgery. Principles of sterile technique are emphasized as the student moves into the scrub role. Lab practice is included.

Surgical Tech Fundamentals 2 **10512128** **4 Credits**
Focuses on enhancing surgical technology skills while functioning as a sterile team member. Lab and or clinical practice is included.

Surgical Technology Clinical 1 **10512132** **3 Credits**
Apply basic surgical theories, principles, and procedural techniques in the operating room. Students begin to function as team members under the guidance of the instructor and authorized clinical personnel.

Surgical Technology Clinical 2 **10512133** **3 Credits**
Further experience in a clinical setting allows the student to continue to improve technical skills while accepting more responsibilities during surgical procedures.

Surgical Technology Clinical 3 **10512135** **3 Credits**
Further experience in a clinical setting allows the student to continue to improve technical skills while accepting more responsibilities during surgical procedures.

Surgical Technology Clinical 4 **10512136** **3 Credits**
During this clinical course the student will function relatively independently. Serves as a transition from a student perspective to an employee by utilizing advanced skills for an entry level Surgical Technologist.

Survey of Criminal Justice **10504819** **3 Credits**
This course provides an overview or survey of the criminal justice system. The structure and function of the police, courts, and corrections will be explained to lay the foundation for further course work.

Sustainable Food Communities **10317166** **1 Credits**
This course is a study of the foodservice industry's environmental impact on natural resources and issues related to sustainable practices such as renewable energy and waste reduction. It explores questions related to our food supply such as where the food was grown, how it was grown, and what was involved in the processing and transporting of that food.

Sustainable Landscape Design **10001142** **2 Credits**
Explore the art of urban landscape design. Learn to assess residential landscape characteristics, master drainage techniques, and create stunning designs within budget constraints. Discover the secrets of walkway design, strategic tree placement, and harmonious plant selection. Join us to transform your horticultural vision into reality and showcase your ultimate urban oasis. Perfect for aspiring horticulturists looking to blend nature with architecture in bustling urban settings.

Tag Based HMI/SCADA Systems **10664101** **2 Credits**
This tag-based software course explains how to create and configure a modern manufacturing execution software application. This course provides fundamental knowledge of the Wonderware visualization module and the step necessary to develop an HMI system. Students will explore setup, layout, best practice concepts, features, and functions of the software.

Talent Acquisition **10116102** **3 Credits**
Introduce the strategic steps and processes used to find, attract, select, and hire quality talent for openings within an organization while considering staffing needs, employment laws, interview skills and retention strategies.

Team Building **10196189** **3 Credits**
The learner applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will demonstrate the application of the benefits and challenges of team work, necessary roles in a team, stages of team development, different approaches to problem solving, consensus, a systemic process of problem definition, data acquisition, analysis, developing alternative solutions, solution implementation, and evaluation.

Technical Reporting **10801197** **3 Credits**
Teaches the preparation and presentation of oral and written technical reports. Types of reports may include lab and field reports, proposals, technical letters and memos, technical research reports and case studies.

Technical Rescue **10503101** **2 Credits**
Exposes the student to the mental and physical rigors of team-based technical rescue. Students will learn and implement common techniques and demonstrate problem solving in area such as Rope Rescue, Trench Collapse Rescue, Confined Space Rescue, Vehicle/Machine Rescue and Structural Collapse Rescue.

Technology in Criminal Justice **10504857** **1 Credits**
This course provides a survey of technological tools used in criminal justice. It examines the use of communication systems, information technology systems, surveillance and imaging technologies, and the forensic applications of software and hardware systems.

The World in the Twentieth Century **20803225** **3 Credits**
Focuses on the emergence of a global society in the Twentieth Century through a chronological examination of the events and trends that created a more closely connected world, resulting in a global society by the end of the century. The course approaches the history of this century through emphasis on themes of particular significance to the creation of global society. These themes include globalization, the growth of mass culture, technology, ideology/religion, and the varied responses of different cultures to the ideas and events of the century.

Total Fitness **20807202** **1 Credits**
This course is designed to allow students to work out on their own. Students will participate in their choice of weight training and/or cardiovascular activities to improve strength and cardiovascular endurance. NOTE: All students are REQUIRED to first attend an orientation session which will introduce and explain how the course works, the syllabus, facility hours and time requirements.

Training & Development **10116159** **3 Credits**
Following the study of the basics of training, students will determine training needs and the most appropriate training methodologies to solve common business problems. Students will develop a lesson plan and present training to their peers.

Training and Development **10154158** **3 Credits**
Students will examine and utilize the steps involved in the training process. Emphasis will be spent on the Brain-based Learning process. Students will plan, prepare and deliver training sessions along with developing training manuals and user documentation. Under instructor supervision, students will also complete a training field study.

Transfer Elective-10 Code **10999999** **6 Credits**
Course ranges from 1 to 6 credits in order to grant transfer credit for electives in an associate degree program.

Transfer Elective-10 code 801 area **10801999** **3 Credits**
3 credit course to allow transfer credit in the 801-Communication area of an associated degree program.

Transfer Elective-10 code 804 area 3cr **10804999** **3 Credits**
3 credit course to allow transfer credit in the 804-Mathematics area of an associated degree program.

Transfer Elective-10 code 804 area 4cr **10804998** **4 Credits**
4 credit course to allow transfer credit in the 804-Mathematics area of an associated degree program.

Transfer Elective-10 code 804 area 5cr **10804997** **5 Credits**
5 credit course to allow transfer credit in the 804-Mathematics area of an associated degree program.

Transfer Elective-10 code 806 area 3cr **10806999** **3 Credits**
3 credit course to allow transfer credit in the 806-Natural Science area of an associated degree program.

Transfer Elective-10 code 806 area 4cr **10806998** **4 Credits**
4 credit course to allow transfer credit in the 806-Natural Science area of an associated degree program.

Transfer Elective-10 code 806 area 5cr **10806997** **5 Credits**
5 credit course to allow transfer credit in the 806-Natural Science area of an associated degree program.

Transfer Elective-10 code 809 area 2cr **10809998** **2 Credits**
2 credit course to allow transfer credit in the 809-Social Science area of an associated degree program.

Transfer Elective-10 code 809 area 3cr **10809999** **3 Credits**
3 credit course to allow transfer credit in the 809-Social Science area of an associated degree program.

Transfer Elective-20 cde 804 area 5cr **20804998** **5 Credits**
5 credit course to allow transfer credit in the 804-Mathematics area of a college parallel program.

Transfer Elective-20 code 801 area 3cr **20801999** **3 Credits**
3 credit course to allow transfer credit in the 801-Communication area of a college parallel program.

Transfer Elective-20 code 802 area 4cr **20802999** **4 Credits**
4 credit course to allow transfer credit in the 802-Foreign Language area of a college parallel program.

Transfer Elective-20 code 804 area 4cr **20804999** **4 Credits**
4 credit course to allow transfer credit in the 804-Mathematics area of a college parallel program.

Transfer Elective-20 code 806 area 3cr **20806999** **3 Credits**
3 credit course to allow transfer credit in the 806-Natural Science area of a college parallel program.

Transfer Elective-20 code 806 area 4cr **20806998** **4 Credits**
4 credit course to allow transfer credit in the 806-Natural Science area of a college parallel program.

Transfer Elective-20 code 806 area 5cr **20806997** **5 Credits**
5 credit course to allow transfer credit in the 806-Natural Science area of a college parallel program.

Trends in the Fire Service **10503105** **3 Credits**
An analysis of current and emerging Fire Service Trends along with various topics relevant to professional firefighters.

Trigonometry **20804213** **3 Credits**
Trigonometry includes study of the six trigonometric functions and their inverse functions; solve right and oblique triangles; know and apply basic identities and simplify trigonometric expressions using identities; solve trigonometric equations; graphing trigonometric functions; understand and apply De Moivre's theorem and the nth-root theorem; understand and use complex numbers and polar coordinates; solve application problems that rely on trigonometry.

Truck Familiarization and CDL **32412418** **2 Credits**
In this course students will become familiar with the basic operation and controls of diesel-powered trucks as well as prepare for the written portion of the Commercial Driver's License (CDL) exam. The course provides an overview of trucks where students learn to identify required maintenance and potential DOT out-of-service violations. The course will also cover topics such as fuel systems, electrical systems, and the proper use of safety equipment. The course covers the requirements for obtaining a CDL, as well as the knowledge and skills needed to pass the exam. Students will practice backing, turning, and shifting techniques in a simulated driving environment.

Turf Management **10001110** **3 Credits**
Selection, cultural care and environmental management of turf in residential and commercial settings will be taught. Students will be trained on current techniques, materials and equipment used in the turf industry. A focus on nutrition, water, and pest management will be a training outcome of this class. Development of maintenance schedules, work schedule and professional ethics will be discussed.

Turning Operations 1 **10420208** **1 Credits**
Requires the learner to identify turning machine components, identify tools and tool holding accessories, verify alignment of machine components, and apply machining theory principles to fundamental turning machine operations.

Turning Operations 2 **10420209** **1 Credits**
Requires the learner to apply appropriate machining theory principles and progressive turning skills to operate turning machines according to industry standards.

Turning Operations 3 **10420210** **1 Credits**
Requires the learner to combine multiple machining processes with turning components and accessories to machine specific features of a work piece.

University Physics 1 - Calculus Based **20806223** **5 Credits**
This is the first course in a two-semester sequence using algebra, trigonometry, and calculus to introduce basic concepts of physics. Topics covered include one-dimensional and two-dimensional kinematics, vectors, one-dimensional and two-dimensional dynamics, rotational kinematics and dynamics, momentum, and temperature and heat. Additional topics may include gravitation, thermodynamics, simple harmonic motion, and wave motion as time allows.

University Physics 2 - Calculus Based **20806224** **5 Credits**
This is the second course in a two-semester sequence using algebra, trigonometry, and calculus to introduce basic concepts of physics. Topics covered include electrostatics, electricity and magnetism, elementary electrical circuits, electromagnetic waves and the nature of light, and optics. Additional topics may include sound, fluid mechanics, Maxwell's equations, basic alternating current circuits, or selected topics in modern physics as time allows.

Urinalysis **10513114** **2 Credits**
This course prepares the student to perform a complete urinalysis which includes physical, chemical and microscopic analysis. Student will explore renal physiology and correlate urinalysis results with clinical conditions.

Using Finan Inst in Farm Mgmt **30090375** **3 Credits**
This course integrates the application of various financial instruments used in acquiring capital for use in the business and investigates the way in which both earning and financial progress can be measured. Students must be actively engaged in production agriculture to enroll in this course.

Using Sys Ana in Farm Plan **30090377** **3 Credits**
This course enables study of concepts related to farm business analysis, and exploration of possible implications and/or solutions to these concepts. A systematic method to assess farm business strengths and weaknesses based on the analysis will be used. Students must be actively engaged in production agriculture to enroll in this course.

Victimology **10504825** **3 Credits**
This course provides an analysis of criminal victimization in the United States via an overview of specific crimes types, theories of victimization/offenders, the impact on crime victims, and the available services needed to assist victims.

Video Production 1 **10701123** **3 Credits**
This course acquaints the student with the tools and techniques of audio production and video post-production; sound pickup, microphone choice, amplification, recording, editing, and audio for audio-visual presentations. Students will evaluate quality level of voice recordings, music, and ambience. Students will develop the vocabulary and techniques necessary for keyframe editing and editing video footage into finished video documents. Learners will have the opportunity to develop non-linear editing techniques through hands-on project applications while honing skills to organize editing projects, manipulate raw footage and graphic elements and assemble them into narrative sequences.

Video Production 2 **10701124** **3 Credits**
Students will receive exposure to equipment used in media production, including set up and take down, video, audio, lighting and other components used in the creation of presentation and media materials. This class concentrates on building basic camera skills, a grasp of the pre-production processes, basic digital file management, basic lighting, and improved editing skills, all while creating fundamental media projects.

Video Production 3 **10701126** **3 Credits**
In this course, students will further develop their skills in video production with an emphasis on lighting, storytelling, design, and the video production process. The course builds on the foundational skills, providing students with a deeper understanding of the technical and creative aspects of video production.

Video Production 4 **10701127** **3 Credits**
In this advanced course, students will build upon their video production skills and focus on developing a visual style for their work, as well as creating a community-based learning project that aligns with a client's message. Students will learn advanced lighting techniques, how to apply advanced creative camera techniques to achieve specific visual effects, and improve their editing techniques. Students will also learn how to evaluate hardware and software to select the appropriate equipment for their projects, whether shooting on-location or in a studio.

Virtualization and Cloud Security **10150146** **3 Credits**
Students are introduced to virtualization and storage management concepts using VMware server virtualization products. This hands-on training course explores installation, configuration, and management of VMware¬Æ vSphere, which consists of VMware ESXi/ESX and VMware vCenter Server.

Visual Communication I **10304122** **2 Credits**
Students learn to utilize physical and digital communication models that employ iconography, illustration, supporting text, photos, sketches, finalized drawings, and data in an effort to creatively communicate design solutions.

Visual Communication II **10304132** **2 Credits**
A continuation of exploring methods of communicating design solutions including creative use of digital imaging technology, as well as, layout and composition software.

Web Design 1 **10201123** **3 Credits**
In this course students will learn to build web sites using HTML (hypertext markup language) code and CSS (Cascading Style Sheets). All coding will be done in a text editor. This course will be taught on Macintosh computers. Prior Macintosh experience will be helpful.

Web Design 2 **10201132** **3 Credits**
In this course students will build upon the knowledge gained in Web Design 1 and integrate more advanced tools and techniques using industry standard web development applications and tools. Macintosh platform.

Web Design 3 **10201142** **3 Credits**
In this course students will continue to develop more advanced web design knowledge and begin working with Content Management Systems. Mixed media for the web will also be explored. Macintosh platform.

Web Development with ASP.Net **10152187** **3 Credits**
This programming course teaches the student how to create dynamic web content and covers advanced object oriented programming principles. The course utilizes SQL and continues building on HTML and .NET skills. Through the use of a database (Microsoft SQL Server), a web programming language (ASP.Net) and a web server, the student will learn how to create database driven web sites.

Web Programming 1 **10152144** **3 Credits**
This is an entry level programming course with a strong emphasis on developing websites. No prior programming experience is required. The course introduces students to HTML, CSS, and JavaScript, and covers fundamental programming concepts.

Web Programming 2 **10152124** **3 Credits**
This course is an in-depth exploration into web development technologies for programmers who are familiar with HTML, CSS, and JavaScript. The focus of the class is primarily on intermediate and advanced JavaScript topics. HTML and CSS will be used to design web pages. Various tools, frameworks, and libraries used for web development will also be explored.

Web Programming 3 **10152134** **3 Credits**
In this course students will explore user interface design for data-driven web applications. Topics will include component-based design, JavaScript UI frameworks, AJAX, HTTP, and integration with web APIs. Students will design and build a front-end web application that integrates with a REST API.

Web Programming 4 **10152164** **3 Credits**
In this course students will explore server-side web development, database integration, HTTP, and web services. Various security issues, including authorization and authentication will also be covered. Students will design and create a RESTful web API.

Website Design 1 **10201111** **3 Credits**
In this course students will learn to build web sites using HTML (hypertext markup language) code and CSS (Cascading Style Sheets). Coding will be done with?industry standard web development software.?Macintosh platform.

Website Design 2 **10201121** **3 Credits**
In this course students will continue to develop their web design skills and begin to work with Content Management Systems. Macintosh platform.

Welding - Heavy Equipment Fabrication **32442327** **2 Credits**
This course is designed to provide basic welding training in the area of minor repairs and fabrication for diesel and heavy equipment technicians.

Welding - TIG 3 **10442116** **2 Credits**
Instruction in tungsten inert gas welding of aluminum sheet and plate in all positions.

Welding Blprnt Reading 2 **31442328** **2 Credits**
This course is designed to develop the student's skill in reading working drawings using AWS welding symbols.

Welding Fabrication 1 **31442302** **2 Credits**
A course of instruction to include the use of rulers/scales, layout and hand tools, power tools and large shop equipment, welding joint designs, and assembly projects by various welding processes.

Welding Fabrication 2 **31442312** **2 Credits**
A course of instruction to include introducing the CNC cutting table and press brake. It continues advancing techniques, tools, and equipment from Fabrication 1. Introduces weldment design considerations. Assemble projects by various welding processes with the use of blueprint symbols.

Welding Fabrication 3 **31442322** **2 Credits**
Introduces factors for working with non-steel materials. Primarily a capstone course allowing students to fabricate their own projects assembled using welding procedures the student develops.

Welding Inspection **31442304** **1 Credits**
A course of instruction to cover the basics of welding inspection techniques, weld testing techniques, and welding codes, specifications, and procedures.

Welding SkillsLab **10442115** **1 Credits**
This course allows for additional lab time to build your skills in any weld process. All lab, no lecture. Refine and master skills to meet competency requirements.

Welding for Diesel and Heavy Equipment **32442318** **1 Credits**
Building on foundational welding knowledge, this course serves as the second level in welding proficiency for Diesel and Heavy Equipment Technicians. It delves deeper into welding techniques, metallurgy, and practical applications essential for elevated expertise in the maintenance and repair of heavy equipment.

Welding for Maintenance **10442109** **3 Credits**
This course is a basic introduction to welding concepts for industrial maintenance personnel in a hands-on lab environment. MIG welding will be the main emphasis of the course along with an introduction to Stick and TIG processes. Plasma cutting and Torch skills will also be included.

Welding-Blueprint Reading 1 **31442308** **1 Credits**
This course is designed to develop the student's skill in reading working drawings of weldments.

Welding-Oxy Fuel Metals Join **31442301** **1 Credits**
Introduction of gas welding and brazing techniques used to join metal pieces together.

Welding-Oxy-Fuel Metals Cutting **31442310** **1 Credits**
This course is designed to teach cutting and heating for the purposes of: loosening; joint preparation for welding and repair; structural shape coping using oxy-acetylene, air carbon arc and plasma arc techniques.

Welding-SMAW 1 **31442303** **2 Credits**
The study of welding techniques and applications for the flat and horizontal positions, to include electrode selection, fundamental joints, welding positions, and basic electricity for arc welding.

Welding-SMAW 2 **31442313** **2 Credits**
The study of welding techniques and applications for the vertical and overhead positions, to include welding metallurgy, metal properties, identification, effects of heat, pre and post weld heat treatments.

Welding-SMAW 3 **31442323** **2 Credits**
The study of welding techniques and applications using the shielded metal arc welding process on pipe in the 5 and 6 positions with and without backing.

Welding-TIG 1 **31442315** **2 Credits**
The study of welding techniques on mild steel and applications of the gas-tungsten arc welding process which will also include set up, troubleshooting and tungsten selection on ferrous materials (steel).

Welding-TIG 2 **31442325** **2 Credits**
Instruction in tungsten inert gas welding of ferrous and non ferrous metals in the flat, vertical and overhead positions as well as on pipe. ASME and AWS requirements are used as guidelines.

Welding-Transportation **32442317** **1 Credits**
This course will cover welding safety, welding terminology, basic Shielded Metal Arc Welding (SMAW), manual oxy-fuel cutting, and plasma cutting as they relate to the transportation fields.

Wellness Today **20807266** **3 Credits**
An introduction to wellness that provides guidelines for preventing disease and enhancing health and physical fitness. Participants will assess their level of wellness and fitness and develop a prescription for behavior modification toward a healthier lifestyle. Learners will participate in exercise labs and discuss contemporary health issues in lecture as a conceptual basis for intelligent, personal healthy decisions and mode of behavior.

Windows PowerShell Scripting **10154110** **3 Credits**
This course will introduce students to PowerShell and how Microsoft utilizes the language for administration and management of Windows servers and clients. PowerShell is built on the .NET runtime language which leverages functional cmdlets to perform both simple and complex tasks. Students will learn to access file systems, data stores, the registry and employ specific cmdlets to install, manage and troubleshoot Windows features and roles.

Windows Server Admin 1 **10150192** **3 Credits**
Provides hands-on experience in the installation and management of microcomputer networks. Topics covered include installing the network operating system, setting up workstations, creating and managing user accounts, network printing, network security, and backup.

Windows Server Admin 2 **10150194** **3 Credits**
Teaches students advanced LAN administration skills such as tuning the network for better performance and monitoring and optimizing the server. The student learns how to manage and customize client workstations. Other topics covered will include managing the NDS tree, working with domains, setting up remote access, installing TCP/IP, and integrating networks.

Wirefeed Welding 1 **31442306** **2 Credits**
The study of welding techniques and applications of the GMAW and FCAW processes in the flat and horizontal positions on ferrous materials (steel).

Wirefeed Welding 2 **31442316** **2 Credits**
The study of welding techniques and applications of the GMAW and FCAW processes using the short circuiting in the vertical and overhead positions on ferrous materials.

Wirefeed Welding 3 **31442326** **2 Credits**
Advanced GMAW and FCAW practices on steel, stainless steel, and Aluminum.

Wireless and Mobile Security **10151115** **3 Credits**
The Wireless and Mobile Security course delivers the wireless knowledge and skills required to secure wireless LANs and WANs. Students will learn and implement the protocols used to configure and manage wireless networks and the technologies used to encrypt and secure the connectivity of mobile infrastructures and end user devices.

Woody Plant Identification **10001158** **3 Credits**
This class presents a systematic approach to the identification and use of woody landscape plants including; deciduous and conifer trees and shrubs, vines, and groundcovers. The plant's ornamental characteristics, cultural needs, and their proper placement in the landscape are presented. Plant walks are taken throughout the community to present the plants in a landscape setting. Students are required to learn the common and botanical names (Latin names) of all the plants presented.

Work Ethics for Food Service **10317167** **1 Credits**
Work ethics is designed to explore the ideals and attitudes critical to job success in the service field and to prepare students to obtain and maintain gainful employment as a valued team member, with an emphasis on quality customer service for both front of the house and back of the house.

Work-Based Learning & Observation **10601117** **1 Credits**
Through hands-on experience and observation students will be immersed in the HVACR Industry. The course includes job shadows within multiple diverse positions across various employers, gaining real-world. Additionally, students will hone essential job interview skills and craft a professional resume.

Workplace Safety **10116180** **3 Credits**
Workplace Safety introduces concepts of occupational safety and health, including regulatory agencies, financial and human impact of occupational injuries and illnesses, and workers' compensation. This course provides an overview of the hazards a worker may encounter on a job site while emphasizing safety and health programs; hazard identification, avoidance, and control; and injury and illness prevention, investigation, and recordkeeping.