Course Descriptions

- Accounting (ACCT)
- Agriculture Economics (AGEC)
- General Agriculture (AGRI)
- Allied Health (ALHE)
- Automated Manufacturing Systems Technology (AMST)
- Animal Science (ANSC)
- Anthropology (ANTH)
- Art History (ARHS)
- Biology (BIOL)
- Business Law (BLAW)
- Business (BUSI)
- Cybersecurity (CESC)
- Chemistry and Biochemistry (CHEM)
- Cosmetology (COSM)
- Computer Science (CPSI)
- Criminal Justice (CRJU)
- Crop, Soil, and Environmental Services (CSES)
- Construction Technology (CTTE)
- Data Science (DASC)
- Early Childhood Education and Development (ECED)
- Economics (ECON)
- Education (EDHP)
- Emergency Medical Sciences (EMSC)
- English (ENGL)
- Geography (GEOG)
- Geology (GEOL)
- Health (HEAL)
- Health Information Technology (HIMT)
- History (HIST)
- Heating, Ventilation, Air Conditioning, and Refrigeration (HVAC)
- Mathematics (MATH)
- Management (MGMT)
- Marketing (MKTG)
- Machine Tool Technology (MSTE)
- Music (MUSC)
- Registered Nursing (NURS)
- Philosophy (PHIL)
- Physical Science (PHSC)
- Physics (PHYS)
- Political Science (PLSC)
- Practical Nursing (PNUR)
- Psychology (PSYC)
- Plant Science (PTSC)
- Social Work (SCWK)
- Sociology (SOCI)
- Spanish (SPAN)
- Speech and Communications (SPCH)
- Technical (TECH)
- Theater (THTR)
- Truck Driving (TRDR)
- University (UNIV)
- Welding (WELD)

Principles of Accounting I (ACCT 10003)
Introduction to financial accounting and the accounting cycle, including the measurement, processing, and communication of financial information.
ACTS Equivalent Course ID: ACCT 2003 Principles of Accounting I.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Explain the role of accounting in business, including the accounting equation.
2. Apply the principles of the double entry accounting system.
3. Analyze and record business transactions, including adjusting and closing entries.
4. Prepare and review basic financial statements.
5. Demonstrate the fundamentals of internal control.

Principles of Accounting II (ACCT 10103)
Introduction to managerial accounting with emphasis on accounting and reporting for manufacturing entities. The course also covers managerial uses of accounting data and reports for decision-making. Student must have completed ACCT 10003 Principles of Accounting I.
ACTS Equivalency Course ID: ACCT 2013 Principles of Accounting II

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Principles of Accounting I (ACCT 10003) with a grade of C or higher.	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Differentiate between cost flow systems in manufacturing.
2. Analyze and record transactions for cost accounting systems.
3. Prepare cost reports.
4. Prepare special reports and analyze accounting information.
5. Define budgeting and apply the budgeting process.

Introduction to Agriculture Business (AGEC 19203)
A study of the structure and organization of agricultural business, to include the basic economic principles and their application to agriculture.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Describe the structure, scope, and components of the agribusiness sector and its role within the food and fiber system.
2. Explain basic economic concepts and management principles as they apply to decision-making in agribusiness.
3. Identify and explain the core functions of management, planning, organizing, leading, and controlling in agricultural business settings.
4. Create a basic business plan for agribusiness operation, incorporating planning, budgeting, and marketing strategies.
5. Work collaboratively in teams to solve real-world agribusiness problems and present practical recommendations.

Farm and Ranch Safety (AGRI 10103)
This course provides a comprehensive overview of safety principles and practices critical to farming and ranching operations from small hand tools to tractors and implements. Emphasis is placed on the identification and mitigation of hazards associated with machinery, livestock handling, chemical usage, electrical systems, confined spaces, and environmental conditions. Students will gain hands-on experience in applying safety protocols and using personal protective equipment (PPE), as well as learning how to develop and implement farm safety plans.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 2 Lab: 1	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Identify and explain the common agricultural hazards.
2. Demonstrate correct use of personal protective equipment (PPE) and apply safe practices during agricultural tasks.
3. Describe tractor ballasting and explain the effect of PTO torque on tractor performance.
4. Interpret farm input labels and safety data sheets.
5. Develop and present a comprehensive farm or ranch safety plan.

Agricultural Mechanics and Equipment (AGRI 10203)
This course introduces students to the principles, tools, and technologies of agricultural mechanics with an emphasis on equipment operation, maintenance, and repair. Students will gain hands-on experience working with tractors, implements, irrigation systems, welding, and basic electrical and hydraulic systems commonly used in modern agriculture. Safety, troubleshooting, and preventative maintenance practices are emphasized to prepare students for efficient and sustainable farm operations.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Farm Ranch and Safety (AGRI 10103)	Spring	Lecture: 1 Lab: 2	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Explain the role of mechanical systems (electrical, hydraulic, and engine) in modern agricultural operations.
2. Demonstrate proficiency in operating and maintaining tractors and common farm implements.
3. Perform basic troubleshooting, repair, and preventative maintenance on agricultural equipment.
4. Apply fundamental welding, fabrication, and mechanical skills to farm projects.
5. Apply safety protocols in the use of agricultural tools, equipment, and shop facilities.

Agricultural Operations I (AGRI 11103)
This introductory course provides students with a foundation in modern agricultural practices, equipment operation, and farm safety. Students will explore the basics of crop and livestock production, soil management, and recordkeeping essential to running a successful farm. Through hands-on activities, students will develop practical skills in operating agricultural tools and machinery, following workplace safety standards, and performing routine farm tasks.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 1 Lab: 2	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Demonstrate safe and effective use of basic farm equipment and tools.
2. Describe fundamental principles of soil, crop, and livestock management.
3. Apply farm safety practices in daily operations.
4. Perform entry-level farm tasks such as planting, feeding, and equipment maintenance.
5. Maintain simple records related to inputs, production, and costs.

Agricultural Operations II (AGRI 11203)
Building on Agricultural Operations I, this course emphasizes applied skills in crop production, animal care, farm equipment operation, and resource management. Students will analyze production systems, apply pest and nutrient management strategies, and practice seasonal farm operations. Emphasis is placed on efficiency, sustainability, and decision-making in real-world farm settings.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Agricultural Operations I (AGRI 11103)	Spring	Lecture: 0 Lab: 3	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Operate and maintain intermediate-level agricultural machinery and technology.
2. Implement crop and livestock management practices for seasonal production cycles.
3. Develop and apply nutrient and pest management strategies.
4. Record, analyze, and interpret farm data to inform decisions.
5. Apply principles of sustainability in farm operations.

Agricultural Operations III (AGRI 11303)
This course advances students' skills in managing integrated farm operations. Students will coordinate crop and livestock activities, monitor resource use, and apply data-driven decision-making to improve productivity and sustainability. Emphasis is placed on equipment efficiency, recordkeeping accuracy, and the application of precision agriculture technologies in daily farm management.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Agricultural Operations II (AGRI 11203)	Fall	Lecture: 0 Lab: 3	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Operate and maintain advanced-level agricultural machinery and technology.
2. Demonstrate leadership and team management skills in an agricultural setting.
3. Apply regulatory, environmental, and food safety standards in farm operations.
4. Evaluate data-driven farm performance metrics to improve decision-making and implement continuous operational improvements.

Precision Agriculture I (AGRI 12103)
This course introduces students to the concept of precision agriculture and its role in modern farming. It covers key applications and technologies such as GPS, GIS, remote sensing, and sensors that support more efficient, sustainable, and profitable agricultural practices. Students will explore how these tools enhance productivity, reduce environmental impact, and build resilience in farming systems. Some lectures may be replaced with field trips.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 1 Lab: 2	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Define precision agriculture and explain its importance in modern agricultural systems.
2. Analyze weather, airspace, and environmental data to create safe and effective flight plans.
3. Operate drones safely and effectively in various scenarios, including emergency situations, to protect people and property.
4. Apply principles of crew resource management (CRM) to ensure effective communication, teamwork, and decision-making during drone operations.

Introduction to Unmanned Aerial Systems (UAS) (AGRI 14103)
This course is designed to equip students with the theoretical knowledge and hands-on skills required to obtain the Federal Aviation Administration (FAA) Part 107 Drone Pilot License. Students can expect a combination of theory-based instruction with practical application. This course provides aspiring drone pilots with the essential knowledge and skills to excel in drone aviation. Students will master FAA Part 107 regulations, ensuring legal compliance and responsible drone operation. Furthermore, students will efficiently plan and execute drone flights using weather and environmental data, all while ensuring safety through checklists and procedures. By the end of the course, students will be fully prepared to pass the FAA Part 107 Drone Pilot License exam through thorough review and practice tests.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 2 Lab: 1	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Describe the FAA Part 107 regulations and explain how they apply to legal and responsible drone operations.
2. Analyze weather, airspace, and environmental data to create safe and effective flight plans.
3. Operate drones safely and effectively in various scenarios, including emergency situations, to protect people and property.
4. Apply principles of crew resource management (CRM) to ensure effective communication, teamwork, and decision-making during drone operations.

Agriculture Science Lab (AGRI 19001)
Agriculture Science Laboratory will introduce students to various agriculture exercises in animal, plant, and soil science. The laboratory will consist of 45 contact hours throughout the length of a semester enabling students to apply knowledge and concepts acquired in the classroom in a field-based setting.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 0 Lab: 2	1

Course Learning Outcomes

By the end of this course, students will be able to:

1. Demonstrate basic hands-on skills in soil, plant, and animal science through guided agricultural lab activities.
2. Identify common tools, techniques, and procedures used in crops, livestock, and greenhouse management.
3. Connect lab experiences to real-world agricultural practices and workforce expectations in the regional industry.

Making Connections in Agriculture (AGRI 19003)

Making Connections in Agriculture is a first semester freshman course centered on the skills and knowledge needed to be a successful UACCB Agriculture Technology student, including academic performance, problem solving, critical thinking, self-management, university policies, issues, trends, and disciplines in agriculture. Students will develop and manage good study behavior to master new learning. The course encourages students to develop a sense of belonging to the campus community, as well as a reasonable understanding of and a commitment to degree completion. Students will be required to attend various agriculture related conferences in the region to obtain additional knowledge and perspective of agriculture in the state of Arkansas.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Identify key historical developments in agricultural education and explain their relevance to contemporary agricultural practices in the United States and Arkansas.
2. Analyze the grand challenge and destabilizing factors in agriculture, and summarize how these issues impact the local, regional, and national agricultural landscape.
3. Evaluate personal academic habits and time management strategies and develop a personalized plan to support academic success in agriculture-related coursework.
4. Demonstrate effective communication and collaboration skills by contributing to group activities that simulate real-world agriculture problem-solving.
5. Construction a professional networking plan that incorporates relevant organizations, conferences, and communication platforms within the agriculture sector.

Farm and Operations Management (AGRI 20103)

This course explores the operations and management of small farms and ranches, with a strong emphasis on the business side of agriculture. Designed for northcentral Arkansas, where family-owned operations predominate, the course covers financial planning, marketing, risk management, and decision-making for livestock (e.g., cattle, goats, and sheep), poultry enterprises, and crop production (e.g., soybeans, rice, corn). Students will learn practical tools to start or manage a small-scale farm business, incorporating local challenges like variable weather, market access, and sustainability. Through case studies, simulations, and hands-on activities, students will develop a basic farm business plan tailored to Arkansas's agricultural landscape. No prior farming experience is required.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Explain key principles of farm management and apply them to small-scale operations.
2. Develop and analyze financial statements, budgets, and cash flow projections for
3. farm businesses.
4. Identify marketing strategies and sales channels suitable for local livestock, poultry, and crops.
5. Assess risks in farming and recommend management strategies, including insurance and legal considerations.
6. Create a basic business plan for a small farm or ranch, incorporating economic tools and local resources.
7. Understand the role of technology, sustainability, and human resources in enhancing farm profitability.

Precision Agriculture II (AGRI 22103)

This course explores advanced technologies and integrated systems used in modern precision agriculture, with an emphasis on practical applications that improve efficiency, productivity, and sustainability. Topics include variable rate application systems, sensor-based input management, yield monitoring, automation and machine guidance, IoT devices, and decision support tools. The course is designed for students with prior exposure to fundamentals of precision agriculture systems. Emphasis is placed on practical applications, field trips, and hands-on activities.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Precision Agriculture I (AGRI 12103)	Fall	Lecture: 1 Lab: 2	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Differentiate between an active and a passive sensor.
2. Create a variable-rate prescription map.
3. Plan and configure an agricultural drone mission flight.
4. Process and analyze images collected by drones.
5. Interpret data from yield monitors, crop sensors, and soil sensors to support site-specific management decisions.

Fundamentals of Remote Sensing and Imagery Analysis (AGRI 24103)
This course aims to provide a foundational understanding of remote sensing principles and imagery analysis techniques with a focus on agricultural applications. Students will learn how to acquire, interpret, and apply remote sensing data to monitor crop health, monitor livestock, assess soil conditions, and improve precision agriculture practices. Topics include introduction to precision agriculture, electromagnetic spectrum fundamentals, vegetation index, sensor technologies, image processing, and geographic information systems (GIS). Through hands-on labs, students will gain practical experience with tools and methodologies to analyze satellite and drone imagery for informed decision-making in agriculture. The course will also introduce the concept of proximal sensing, where students will compare data obtained through proximal sensing with remotely sensed data, along with UADA commercial applicator technician education.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 1 Lab: 2	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Describe the principles and goals of Precision Agriculture and its role in modern crop systems.
2. Explain the basics of remote and proximal sensing, including types of sensors, wavelengths, and their agricultural applications.
3. Collect and retrieve imagery using drones and satellite tools, ensuring basic safety and accuracy with geospatial techniques.
4. Process collected imagery using image processing software tools to create basic outputs like orthomosaic files.
5. Explain the key state and federal regulations governing commercial and non-commercial pesticide licensing.

Crop Production (AGRI 26103)
This course introduces principles of crop production for small to mid-scale farms. Planting, growth stages, equipment use, and harvest techniques for row and specialty crops will be covered. Students gain hands-on experience in field preparation, seeding, irrigation, and crop monitoring, with attention to regenerative practices like cover cropping and reduced tillage.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 2 Lab: 1	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Identify common cropping systems in the U.S. and Arkansas.
2. Identify plant structures, life cycles, and varieties.
3. Evaluate the impact of environmental factors on growth and development.
4. Interpret seed tags, rates and irrigation equipment.
5. Evaluate fertilizers, soil amendments, and conservation practices.

Crop Management (AGRI 26203)

This course focuses on managing crops through the growing season for optimal yield and soil health. Topics include crop rotation, nutrient management, and field scouting. An emphasis will be placed on practical decision-making and sustainable practices, including soil-building strategies and integrated crop planning suited to Arkansas's diverse farm operations.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Crop Production (AGRI 26103)	Spring	Lecture: 1 Lab: 2	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Identify important rice, soybean, and cotton varieties, growth stages, and management practices.
2. Select the optimal pest control solution for each crop.
3. Describe the planting and harvesting process of each crop.
4. Evaluate fertilization and harvesting techniques for each crop.

Pest Management (AGRI 26303)
This course covers identification and control of weeds, insects, and diseases affecting crops. It emphasizes integrated pest management (IPM), resistant crop varieties, and biological controls. Students apply hands-on scouting, diagnosis, and treatment techniques while exploring eco-friendly and regenerative options for long-term pest control on small to mid-scale farms.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 2 Lab: 1	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Calibrate a sprayer and demonstrate application methods.
2. Evaluate pest population density against established thresholds.
3. Identify signs and symptoms of common pests and diseases.
4. Determine control methods for common pests and diseases.
5. Interpret a pesticide label and apply accordingly.

Poultry Production (AGRI 27103)
This course focuses on small-scale poultry production, including broilers, layers, and specialty breeds. It covers housing, breeding, incubation, flock care, on-farm processing, and biosecurity. Students gain hands-on experience and explore direct marketing of eggs and poultry meat, with practices suited to farms, homesteads, and local markets in rural Arkansas.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 2 Lab: 1	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Differentiate poultry breeds and their suitability for meat, eggs, or dual-purpose systems.
2. Discuss poultry nutrition, anatomy, physiology, and growth in production systems.
3. Evaluate poultry housing, welfare, disease management, and biosecurity protocols.
4. Evaluate egg grading, meat processing, and value-added product standards based on USDA guidelines.
5. Demonstrate practical knowledge through feed evaluation, incubation planning, and brooding setup.

Livestock Production (AGRI 28103)
This course covers practical aspects of raising beef, swine, sheep, goats, and poultry, including handling, breeding, facilities, and farm management. Students develop hands-on skills through labs and farm visits. Topics include daily care, recordkeeping, and basic considerations for nutrition and health as part of efficient livestock production in Arkansas.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 2 Lab: 1	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Compare and contrast sectors of the livestock industry based on species, breeds, and uses.
2. Identify organs and functions of the major body systems of various species of livestock.
3. Discuss breeding and genetics among the various livestock species.
4. Compare and contrast common disease management issues among different livestock species and industries.

Animal Nutrition (AGRI 28203)
This course introduces principles of animal nutrition with emphasis on feed types, ration formulation, and nutrient requirements for livestock. Students gain practical experience evaluating feedstuffs, balancing rations, and managing feeding programs for common Arkansas farm animals through labs, fieldwork, and real-world scenarios.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Livestock Production (AGRI 28103)	Spring	Lecture: 1 Lab: 2	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Discuss the major nutrients (water, carbohydrate, lipid, protein, vitamin, and mineral).
2. Compare and contrast the digestive system anatomy of ruminants and non-ruminants.
3. Describe the digestion, absorption, metabolism, and excretion of nutrients.
4. Evaluate nutritional requirements for maintenance, growth, reproduction, lactation, and work.
5. Evaluate and balance feed rations to meet specific animal performance goals.

Animal Health (AGRI 28303)

This course covers basic principles of animal health and disease prevention with hands-on training in sanitation, vaccination, nutrition, housing, and parasite control. There will be an emphasis on practical skills for identifying, preventing, and treating common livestock diseases in Arkansas's rural settings through labs, demonstrations, and real-world farm scenarios.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Livestock Production (AGRI 28103)	Spring	Lecture: 2 Lab: 1	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Describe basic concepts of animal health and disease.
2. Identify major causes of infectious diseases and their prevention.
3. Describe normal immune function and animal responses to disease.
4. Evaluate the impact of diseases on body systems and uncommon conditions
5. Explore One Health concepts, including zoonotic and food safety issues.

Agriculture Internship (AGRI 29303)

Agriculture Internship is a cooperative program between the student, the college, and an industry partner to foster the development of skills needed to be successful in the work environment. The student will develop a professional career portfolio and will be placed in a career training position in industry where the employer/mentor provides on-the-job training as an extension of the college classroom. Students spend approximately four weeks in class and up to ten weeks participating in on-the-job training during the semester for an equivalent of 80 hours of on-the-job training.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Apply classroom knowledge in real-world agricultural settings.
2. Evaluate career interests and goals within the agriculture industry.
3. Understand and comply with industry-specific regulations and safety standards.
4. Prepare a final report and/or presentation summarizing the internship experience.

Medical Terminology (ALHE 10503)

This course will provide the framework needed for advancing to other medical/allied health courses as it offers an introduction to medical terminology through the analysis of word construction including prefix, suffix, word roots, and combining forms. The student will acquire an understanding of medical meanings applicable to structure, function, and diseases of the human body. Abbreviations and their appropriate usage are also introduced. Upon completion of this course, students will gain the knowledge and abilities to confidently tackle the most complicated medical terms and use this ability throughout their educational experiences and health-related careers.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Construct accurate medical terms by combining appropriate prefixes, root words, suffixes, and combining forms using standard linguistic rules.
2. Relate medical terminology to basic anatomical and physiological concepts to explain normal body functions and common disease processes.
3. Demonstrate accurate use of medical terminology and abbreviations in both written and oral healthcare communication.

Introduction to Health Professions (ALHE 11043)
This course provides a general overview of the many health-related professions and the special concerns of the health care worker.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	This course is currently offered only to concurrently enrolled high school students.	Lecture: 3 Lab: 0	3

Course Learning Outcomes
By the end of this course, students will be able to:

1. Describe the scope of practice, educational preparation, legal/ethical and economic aspects of various health related professions.
2. Demonstrate effective oral/written communication used by various health related professions.
3. Discuss the multifaceted roles of healthcare professionals in an interdisciplinary approach to health care.
4. Describe the current healthcare system and their trends.
5. Discuss the principles of Infection Control in health care.
6. Describe behaviors of job success.
7. Describe personal qualities required for those who hope to pursue a career in health care.
8. Discuss professionalism.
9. Identify the rights and responsibilities of health care workers.

First Aid and CPR (ALHE 11103)
Students will learn the skills needed to respond to and manage an emergency until emergency medical services arrive. Skills covered in this course include first aid; choking relief in adults, children, and infants; and what to do for sudden cardiac arrest in adults, children, and infants.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	This course is not currently offered.	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Describe the concepts of the Chain of Survival.
2. Perform high-quality CPR for the adult, child, and infant.
3. Recognize when someone needs CPR.
4. Describe how to perform two person CPR.
5. Demonstrate how to use an AED.
6. Describe when and how to help a choking adult, child, and infant.
7. List the priorities, roles, and responsibilities of first aid rescuers.
8. Describe the key steps in first aid.
9. Describe the assessment and first aid actions for: Heart attack, difficulty breathing, choking, sever bleeding, shock, and stroke.
10. Identify the proper use of an epinephrine pen.
11. Control bleeding with bandaging.
12. Recognize elements of common injuries.
13. Recognize elements of common illnesses.
14. Recognize the legal/ethical concepts that apply to first aid rescuers.

First Responder (ALHE 11203)

This course provides students with the core knowledge, skills and attitudes to function in the capacity of a first responder. The First Responder uses a limited amount of equipment to perform initial assessment and intervention and is trained to assist other EMS providers.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	This course is not currently offered.	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Describe the roles of EMS in the healthcare system.
2. Demonstrate the professional attributes expected of EMRs.
3. Perform the roles and responsibilities of an EMT with regard to personal safety and wellness, as well as the safety of others.
4. Perform the duties of an EMR with regard for medical-legal and ethical issues, including function under medical direction and within the scope of practice.
5. Apply principles of anatomy, physiology, pathophysiology, life-span development, and therapeutic communications to the assessment and management of patients.
6. Identify the need for and perform immediately life-saving interventions to manage a patient's airway, breathing, and circulation.
7. Assess and manage patients of all ages with a variety of complaints, medical conditions, and traumatic injuries.
8. Apply principles of emergency medical services operations, including considerations in ambulance and air medical transportation, multiple casualty incidents, gaining access to and extracting patients, hazardous materials incidents, and responding to situations involving weapons of mass destruction.

Health Skills I (ALHE 15037)
A study of concepts that serve as the foundation for health professions courses. Topics include client handling and safety issues, health documentation and methods, and care of the client in a long-term care facility. With successful completion of this course, the student will be eligible to take the state certification exam and apply for certification as a nursing assistant. CPR certification will also be obtained. This course follows the guidelines outlined by the Office of Long-Term Care.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring	Lecture: 6 Lab: 2	7

Course Learning Outcomes

By the end of this course, students will be able to:

1. Demonstrate basic nurse assistant skills.
2. Perform the duties and responsibilities of a nursing assistant.
3. Demonstrate when to seek the nurse to report and observe change in the client.
4. Address infection control standards and discuss several common diseases.
5. Demonstrate ability to document observations of client needs.
6. Address psychosocial issues of clients in health care facilities.
7. Discuss Good Samaritan laws and who they protect and to what extent.
8. Respond to a client in an emergency situation, get their data, and report appropriately.
9. React to client situations utilizing the concepts of CA be (circulation, airway, and breathing).
10. Utilize common terminology; Recognize important signs/ symptoms.
11. Demonstrate communication (listening and reporting) skills
12. Explain care needs of the geriatric client and care needs as related to dementia.

Phlebotomy (ALHE 16037)
This course prepares individuals, under the supervision of physicians and other health care professionals, to draw blood samples from patients using a variety of intrusive procedures. This includes instruction in basic vascular anatomy and physiology, blood physiology, skin puncture techniques, venipuncture, venous specimen collection and handling, safety and sanitation procedures, and applicable standards and regulations.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring	Lecture: 5 Lab: 2	7

Course Learning Outcomes

By the end of this course, students will be able to:

1. List the steps in selected specimen collection procedures performed by the phlebotomy technician.
2. Discuss the safety procedures in the healthcare setting and specifically in performing specimen collection procedures.
3. Identify specific supplies and equipment used in selected specimen collection procedures.
4. Participate in a discussion about precautions and guidelines when collecting specimens in special populations such as pediatrics and geriatrics.
5. Define quality of care and explain the impact on patient medical care when quality and safety are compromised in phlebotomy procedures.
6. Describe the anatomy, physiology, pathophysiology, and medical terminology associated with phlebotomy.
7. Discuss the requirements of the successful phlebotomy career including desired character traits, training, and education roles and responsibilities.
8. Demonstrate professional communication techniques with clients and others in the healthcare setting verbally, nonverbally, with health record and using computer systems.
9. Identify common legal issues, ethical issues, and regulatory issues commonly impacting the phlebotomist.

Nutrition (ALHE 20033)
Covers the fundamentals of normal and clinical nutrition. Information regarding clinical nutrition is organized according to an organ system/disease states approach. Topics such as fitness, consumer concerns, cancer and AIDS are included.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Explain the role of nutrition in health, including how food choices influence chronic disease risk and overall well-being.
2. Identify credible sources of nutrition information and apply dietary guidelines, including the Dietary Reference Intakes, to support healthy eating habits.
3. Describe the process of digestion, absorption and nutrient metabolism, and apply this knowledge to common conditions such as diabetes and cardiovascular disease.
4. Evaluate the functions, food sources, and health impacts of key nutrients, including vitamins, minerals, proteins, and their role in energy metabolism.
5. Apply nutritional principles to special populations and situations, including pregnancy, lactation, physical activity, weight management, and food safety.

Health Assessment (ALHE 20103)
Provides learners with the opportunity to develop and practice health history taking and physical examination skills. History taking methodology, physical examination skills, health promotion techniques and clinical assessment tools are discussed. Age related assessment considerations and findings are reviewed. The learner will be able to perform a comprehensive medical history and physical assessment upon successful completion of this course. Student must hold a current RN license or be enrolled in the registered nursing program or obtain the instructor's permission.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Obtain health histories for a child, adult, and/or geriatric patient(s).
2. Execute lifestyle risk factors assessment for identified patient(s).
3. Compile health teaching materials for at-risk patient(s).
4. Perform a mental status examination on an adult patient.
5. Adapt physical examination techniques for infant, child, and geriatric patients.
6. Evaluate assessment needs of patient(s) presented in simulated clinical situations.
7. Perform a physical examination using appropriate equipment and technique.

Pharmacology (ALHE 23003)
This three credit hour course will examine how the body handles drugs and the effects of various classes of drugs on the body, including sites and mechanisms of action, therapeutic and side effect, and toxicology. The pharmacologic knowledge will prepare the learner to function in the changing health care environment. Successful and safe clinical practice is built on understanding the concepts and principles of pharmacology. The concepts of pharmacology will guide drug use in clinical practice. The approach is to relate the physiologic and pathophysiologic factors of disease processes to drug mechanisms and subsequent care.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Demonstrate knowledge of pharmacodynamics and pharmacokinetics.
2. Demonstrate knowledge of major drug classes in terms of physiologic and biologic activity, therapeutic applications, route of administration and dosage, side effects, adverse reactions, indications, contraindications, and interactions.
3. Apply knowledge in the establishment of dosage, intervals, and scheduling of drugs to a variety of patients.
4. Describe the legal guidelines that apply to drug administration.

Computer Aided Drafting and Design (AMST 20303)
CADD is a shortened term for automated computer-aided drafting and design. The course introduces students to three-dimensional modeling in CADD software environments. Students familiarize themselves with two-dimensional and three-dimensional CADD modeling commands, files, menus, and tools. Course expectations require students to proficiently draft, modify, and digitally transfer CADD files using appropriate computer manufacturing and design software. Students utilize CADD files to produce tangible products.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 2 Lab: 1	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Navigate computer-aided drafting and design software.
2. Create and manipulate 3D models of parts and assemblies.
3. Create engineering drawings that accurately represent 3D models, using standard drafting conventions and symbols.
4. Manage CADD files in an organized way.

Fluid Power (AMST 20403)
This course provides theory and hands-on experience with the operations of fluid power systems (hydraulic and pneumatic). Troubleshooting, repair, and design considerations are key components of the course. Laboratory trainers are used to design, build, test, and experiment with hydraulic and pneumatic circuits.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite: Technical Math (MATH 10103)	Spring	Lecture: 2 Lab: 1	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify the components of fluid power systems.
2. Analyze fluid power schematics to determine system function.
3. Interpret fluid power diagnostic equipment to confirm proper system operation.
4. Troubleshoot and correct problems within a fluid power system.

Programmable Logic Controllers (AMST 20504)
This course introduces control fundamentals and logic control concepts used in programming and operating Programmable Logic Controllers used in industrial processes. A computer-based simulator using LogixPRO software is used to provide initial training on Allen Bradley PLCs. The course introduces math functions, logic and bit shift instructions, compare and jump instructions, subroutine functions, and sequencer instructions. In addition to the computer-based simulator, live simulators are used in laboratories to practice programming, wiring, and operating live PLCs with input and output devices.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Technical Math (MATH 10103) or higher-level math course.	Spring	Lecture: 3 Lab: 1	4

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe a programmable logic controller and its function within an industrial system.
2. Interpret existing PLC programs and ladder logic diagrams.
3. Identify components of hardware systems aligned with corresponding schematics.
4. Develop PLC programs based on mock requirements.
5. Troubleshoot and correct PLC programs.

Robotics (AMST 21303)

In this course students will become familiar with Embedded Robotics. Students will learn programming of embedded controllers, interfacing of sensors (inertial measurement unit, light & color, and color video camera), the actuation of servo motors, serial communications, and the control of autonomous robotics systems. Students will practice lower-level programming using the C language. Concepts and methodologies will be demonstrated in class with sample code and the students will expand on these further during in-class exercises. Upon completion of this course, students will have an integrated hardware/software understanding of embedded robotic systems in preparation for application in the workplace.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite: DC Electricity (TECH 10353)	Spring	Lecture: 2 Lab: 1	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify components utilized within modern robotics.
2. Design, build, and program a robot to fulfill requirements when presented with a scenario.
3. Build autonomous protocols for a robot using various sensors (encoders, potentiometers, sonar, etc.).
4. Program and troubleshoot an industrial robot arm.

Introduction to CNC Machinery (AMST 22333)
This course introduces the concepts and capabilities of computer numerical control machines. Topics include setup, operation, and basic applications. Upon completion, students should be able to explain operator safety, machine protection, data input, program preparation, and program storage.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 2 Lab: 1	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Program CNC equipment using design software.
2. Produce original designs utilizing CNC equipment from a variety of materials.
3. Perform maintenance on CNC equipment.

Computer Aided Manufacturing (CAM) (AMST 23303)
Introduction to the principles of modern-day multi-axis machine tool control, using computer-aided manufacturing (CAM) software tools. Emphasis is placed on transferring part geometry from CAD to CAM, for the development of CNC-ready programs. Industry file formats, machining strategies, G&M-code generation, optimization and verification techniques will also be investigated. Upon successful completion of this course, students will be able to demonstrate proficiency in the use of industry-relevant CAD/CAM software and will be able to extend that knowledge to practice through exercises and projects. Use of CNC machine tools will be introduced and demonstrated in the department's physical lab spaces.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Computer Aided Drafting and Design (AMST 20303)	This course is not currently offered.	Lecture: 2 Lab: 1	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Demonstrate proper CNC Milling Machine start-up and power-down.
2. Explain safe machine operation practices.
3. Demonstrate how to program tool and part offsets.
4. Demonstrate proficiency navigation of the CNC control keypad, screen and control functions.
5. Identify common workpiece material types.
6. Identify and explain the use of common tooling.
7. Demonstrate basic machine maintenance strategies and techniques.

Preventative Maintenance and Troubleshooting (AMST 24003)

This course introduces students to the fundamentals of preventative maintenance with an emphasis on safety, proper tool use, and hands-on skill development. Students will learn to inspect, service, and maintain industrial and facility equipment to prevent failures and extend equipment life. Instruction includes basic mechanical systems, lubrication practices, fasteners, belts and drives, bearings, and common wear components. Students will develop skills in conducting routine inspections, identifying early signs of equipment deterioration, adhering to maintenance schedules, and documenting maintenance activities. Emphasis is placed on accuracy, reliability, and adherence to industry safety standards. Upon completion, students will be prepared for entry-level maintenance positions or for further training in industrial maintenance and related technical fields.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Basic Machining (MSTE 12003)	Spring	Lecture: 0 Lab: 3	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Identify and classify common mechanical and facility system components and recognize typical signs of wear, damage, and failure during routine inspections.
2. Demonstrate and apply preventative maintenance procedures, including lubrication, adjustment, and scheduled component replacement, in accordance with manufacturer specifications and maintenance plans.
3. Apply and demonstrate safe operation of hand tools, power tools, and basic diagnostic equipment while complying with OSHA and industry safety standards.
4. Record, interpret, and report preventative maintenance activities by accurately completing work orders, inspection checklists, and maintenance documentation.

Introduction to Animal Science (ANSC 19303)
A study of animals that provide food, fiber, and companionship to humankind, including the history and scope of animal agriculture, products produced from animals, reproduction, breeding and genetics, nutrients and digestion, lactation, behavior, and overview of production systems.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Explain the biological and physiological processes involved in animal growth, reproduction, and digestion.
2. Compare and contrast common livestock production systems with regard to efficiency, animal welfare, and sustainability.
3. Apply basic genetic and breeding principles to evaluate strategies for improving livestock traits.
4. Analyze nutritional requirements and develop feed plans for different classes of livestock.
5. Summarize ethical considerations and environmental impacts associated with animal agriculture practices.

Cultural Anthropology (ANTH 20103)
This course introduces the concept of culture and cultural processes. It examines perceptions of race, gender, and ethnicity and compares human adaptation across cultures and through time in terms of subsistence methods, social and political organization, economics, stratification, marriage and family structure, religion, kinship, and language.
ACTS Equivalency Course ID: ANTH 2013 Cultural Anthropology.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Define anthropology, and related sub-disciplines, and discuss the techniques, ethics and theoretical concerns of human ethnography.
2. Be able to discuss the social institutions comprising human culture and the interrelatedness of each.
3. Exhibit an understanding of ethnocentrism and culture relativism in relations to the stereotypes of everyday life.
4. Be able to analyze the anthropological concepts in a critical understanding of everyday activities and relationships.
5. Discuss the construction of culture as specifically related to the following: language, family, marriage, gender, and religion.

Visual Art (ARHS 10003)
An introductory survey of the visual arts. Exploration of purposes and processes in the visual arts including evaluation of selected works, the role of art in various cultures, and the history of art.
ACTS Equivalent Course ID: ART 1003 Art Appreciation.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Identify key visual elements, principles of design, and various media used in the creation of visual art.
2. Analyze the nature, purpose, and function of visual arts across different cultures and historical periods.
3. Recognize and compare stylistic characteristics of selected works and major artists within specific art movements or time periods.
4. Critique an original work or art using appropriate terminology.

Biology for General Education Lab (BIOL 10031)
Students will apply laboratory techniques in experimentation and observation to illustrate biological concepts as covered in Biology for General Education. This course is not appropriate for biology or health science majors and will not fulfill the lab requirement for Biology for Majors.
ACTS Equivalent Course ID: BIOL 1004 Biology for Non-Majors. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite: Biology for General Education (BIOL 10043)	Fall Spring Summer	Lecture: 0 Lab: 2	1

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply the scientific method as a system of inquiry by designing and conducting experiments, analyzing data, and communicating findings through written and oral reports.
2. Perform laboratory techniques, including microscopy, measurement conversions, cell staining, pipetting, and proper use of lab equipment with precision and accuracy.
3. Analyze the structure and function of cells and organisms, energy transformations, cellular reproduction, as well as evolutionary principles and classification.
4. Evaluate ecological relationships by explaining interactions between organisms and their environments using scientific principles and evidence.

Topics included in his course:

- Organismal structure and function, including all kingdoms
- Cell structure and function
- Genetics and reproduction
- Ecology
- Basic components of evolution and classification
- Use of microscope and other lab equipment

Biology for General Education (BIOL 10043)
A survey of biology to include an introduction to the fundamental principles of living organisms including properties, organization, function, evolutionary adaptation, and classification. Introductory study of concepts of reproduction, genetics, ecology and the scientific method are included. Not appropriate for biology or health science majors. ACTS Equivalent Course ID: BIOL 1004 Biology for Non-Majors. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite: Biology for General Education Lab (BIOL 10031)	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Explain the characteristics and organization of life, including principles of natural selection and diversity, as well as identifying the key characteristics of the domains and kingdoms of life, including their ecological roles.
2. Identify and describe the steps of the scientific method and apply them to analyze natural phenomena.
3. Describe the basic chemical components of living organisms and explain how energy is transformed within cells and ecosystems.
4. Explain cellular structure and function, and demonstrate understanding of the principles of reproduction, genetics, and inheritance.

Topics included in this course:

- Scientific method
- Organismal structure and function, including all kingdoms
- Cell structure and function
- Genetics and reproduction
- Ecology
- Basic components of evolution and classification

Biology for Majors Lab (BIOL 10101)
Students will apply laboratory techniques in experimentation and observation to illustrate biological concepts covered in Biology for Majors.
ACTS Equivalent Course ID: BIOL 1014 Biology for Majors. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite:	Fall	Lecture: 0	1
Biology for Majors (BIOL 10103)	Spring	Lab: 2	

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply the scientific method as a system of inquiry by designing and conducting experiments, analyzing data, and effectively communicating findings through written and oral reports.
2. Preform laboratory techniques, including microscopy, measurement conversions, cell staining, pipetting, and gel electrophoresis for DNA analysis.
3. Analyze cellular structure and function, energy transformation, the principles of cellular reproduction and the use of DNA technologies using laboratory data.
4. Evaluate experimental results and scientific data using appropriate laboratory techniques, to draw evidence-based conclusions.

Topics included in this course:

- Scientific Method
- Classification
- Cell and membrane structure functions
- Biochemistry
- Enzymes
- Respiration and photosynthesis
- Mitosis and meiosis
- Metabolism
- Genetics
- DNA
- Evolution
- Use of microscope and other lab equipment

Biology for Majors (BIOL 10103)
Cellular and molecular biology are the main areas of focus. Basic concepts of ecology will also be covered.
ACTS Equivalent Course ID: BIOL 1014 Biology for Majors.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite: Biology for Majors Lab (BIOL 10101)	Fall Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the characteristics, organization, and chemical basis of life, including the structure and function of cells, enzymes, and cellular membranes.
2. Analyze the processes of cellular metabolism, including photosynthesis, cellular respiration, and enzyme function, to explain energy transformations in living organisms.
3. Apply principles of genetics, inheritance, and cellular reproduction (mitosis and meiosis) to predict genetic outcomes and explain the structure and function of DNA in heredity.
4. Explain the principles of natural selection, biodiversity, and classification.
5. Apply the scientific method to answer questions about natural phenomena.

Topics included in this course:

- Scientific Method
- Classification
- Cell and membrane structure and functions
- Biochemistry
- Enzymes
- Respiration and photosynthesis
- Mitosis and meiosis
- Metabolism
- Genetics
- DNA
- Evolution

Essentials of Anatomy and Physiology Lab (BIOL 10151)
A laboratory experience emphasizing the anatomy of human organ systems and measurements of human physiology. The course does not meet requirements for AS degree science majors.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: ENGL 00203 or equivalent or higher course with a grade of C or higher OR ACT Reading score of 19 or equivalent placement score. Corequisite: Essentials of Anatomy and Physiology (BIOL 10253)	Fall Spring Summer	Lecture: 0 Lab: 2	1

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify general subcellular, cellular, and tissue-level features using a compound light microscope.
2. Demonstrate competent use of the language of anatomy, using conventional terms for anatomical landmarks, regions, directions, and movements.
3. Identify the major gross anatomy of the skeletal, muscular, nervous, endocrine, cardiovascular, respiratory, digestive, urinary, and reproductive systems.
4. Explain the major functional anatomy of the special sense organs, endocrine glands, heart, digestive system, urinary system, and reproductive system.
5. Recognize the cellular anatomy of the integument, endocrine glands, blood, and digestive system.

Essentials of Anatomy and Physiology (BIOL 10253)
Focuses on concepts of basic chemistry and human biology, including basic cellular biology and the structure and function of human organ systems. The course is designed for majors in EMT-Paramedic, Medical Office Management, Practical Nursing, and as an AA degree general education or liberal arts focus elective. This course does not meet requirements for AS degree science majors.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisites: (ENGL 00203) or equivalent or higher course with a grade of C or higher OR ACT Reading score of 19 or equivalent placement score. Corequisite: Essentials of Anatomy and Physiology Lab (BIOL 10151)	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Summarize the hierarchy of biological organization, including description of the relationships between and among each level.
2. Characterize the organ systems that support the body physically and enable its action.
3. Distinguish between methods and modes of input, integration, and output managed by the body's sensorimotor and regulatory systems.
4. Describe the organ systems that manage the movement of materials needed to sustain life and protect the internal environment from pathogens.
5. Explain the body processes used to engage the external environment to collect fuel, handle waste, and reproduce.

General Botany Lab (BIOL 10301)
This course will cover the structure and function of plants. Topics to be covered include cells, tissues, photosynthesis, survey of plant groups, and plant reproduction. Students will be required to use microscopes and other lab equipment as necessary. This course is designed for science majors.
ACTS Equivalency Course ID: BIOL 1034 Botany for Majors. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisites: Biology for Majors with Lab (BIOL 10103/BIOL 10101) with a grade of C or higher. Corequisite: General Botany (BIOL 10303)	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 0 Lab: 2	1

Course Learning Outcomes By the end of this course, students will gain knowledge of:
1. Scientific Method
2. Classification and evolution of plants
3. Structure and function of vascular and non-vascular plants
4. Plant reproduction
5. Photosynthesis
6. Respiration
7. Characteristics of major plant groups

General Botany (BIOL 10303)
This course will cover the fundamental principles of botany, including properties, structure and function, growth, and classification of plants. Concepts included are plant reproduction, photosynthesis, ecology, and genetics. This course is designed for science majors.
ACTS Equivalency Course ID: BIOL 1034 Botany for Majors. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite: General Botany Lab (BIOL 10301)	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will gain knowledge of:

1. Scientific Method
2. Classification and evolution of plants
3. Structure and function of vascular and non-vascular plants
4. Plant reproduction, including mitosis and meiosis
5. Photosynthesis
6. Cellular respiration
7. Requirements for plant growth
8. Ecological relationships

Principles of Zoology Lab (BIOL 10501)
Laboratory exercises illustrating animal structure, physiology, genetics, and ecology. ACTS Equivalency Course ID: BIOL 1054 Zoology. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite: Principles of Zoology (BIOL 10503)	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 0 Lab: 2	1

Course Learning Outcomes

By the end of this course, students will be able to:

1. Understand the structure and function of tissues and animal classification.
2. Each student will know the basic anatomy and identification by making observations and performing dissections of the following organisms:
    a. Protozoa
    b. Porifera and Cnidaria
    c. Platyhelminthes and Nematoda
    d. Mollusca and Annelida
    e. Chelicerates and crustaceans (Arthropoda)
    f. Myriapods and insects (Arthropoda)
    g. Echinodermata
    h. Fishes (Chordata)
    i. Amphibians and Reptiles (Chordata)
    j. Birds and Mammals (Chordata)

Principles of Zoology (BIOL 10503)
Principles governing all animals' forms and functions. This course will cover extensively the phylogenetic survey of the Kingdom Protista and Kingdom Animalia.
ACTS Equivalency Course ID: BIOL 1054 Zoology. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite: Principles of Zoology (BIOL 10501)	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Understand the basics of the scientific method and evolutionary principles, animal ecology, animal architecture, classification and phylogeny.
2. Know the characteristics and phylogeny of the Protista, Sponge, Radiate, Animals, Acoelomates, Pseudocoelomates.
3. Know the characteristics and phylogeny Molluscs, and Segmented Worms, Arthropods, Lesser Protostomes, and Lophophorates, Echinoderms, Hemichordates, and Chaetognaths.
4. Know the basic characteristics of chordates, and characteristics and phylogeny of fishes, early tetrapods and modern amphibians, reptiles, birds, and mammals.

Microbiology Lab (BIOL 20001)
Provides experience with microbiological laboratory techniques. Emphasis is placed on culturing and identifying medically important bacteria and human parasites.
ACTS Equivalent Course ID: BIOL 2004 Introductory Microbiology. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite: Microbiology (BIOL 20003)	Fall Spring Summer	Lecture: 0 Lab: 3	1

Course Learning Outcomes By the end of this course, students will be able to:

1. Demonstrate competent and productive use of conventional microbiological tools and techniques.
2. Describe bacterial species according to cellular shape, arrangement, and classification using compound light microscopy following a range of sample preparation and sample staining techniques.
3. Survey diverse bacterial species according to physiological properties by interpreting results from a panel of standard biochemical tests.
4. Analyze microbial growth under varying environmental conditions and when cultured from a variety of natural and consumer-product sources.

The course will explore the following topics in pursuit of these outcomes:

- Use of a microscope
- Preparation of stains
- General laboratory techniques, including but not limited to aseptic technique, streak plating, and identification methods

Microbiology (BIOL 20003)
Emphasizes the biology of medically important microorganisms. Topics include the history of microbiology, cellular and molecular biology of prokaryotes, epidemiology and pathogenicity, as well as surveys of bacterial, fungal and viral groups.
ACTS Equivalent Course ID: BIOL 2004 Introductory Microbiology. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Any biology course with a four-hour combination of lecture and lab with a grade of C or higher except Biology for General Education with Lab (BIOL 10031/BIOL 10043) Corequisite: Microbiology Lab (BIOL 20001)	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Explain the fundamental biological processes underlying microbial life.
2. Describe strategies for control of microbial spread.
3. Evaluate the relationship between individual human hosts and microbes.
4. Evaluate the relationship between human populations and microbes.

The course will explore the following topics in pursuit of these outcomes:

- History of microbiology
- Biological and chemical concepts, including metabolism, as applied to microorganisms
- Basic classification, characteristics, and behavior of microorganisms
- Host-microbe interactions that result in infection
- Fundamentals of immunology
- Principles of asepsis, sterilization, and disinfection
- Principles of epidemiology as they apply to the effect of microorganisms on the human population
- General methods for the prevention and control of infectious disease transmission
- Microbial growth
- Microbial genetics

Pathophysiology for Health Care (BIOL 21053)
Study of the pathology and general health management of diseases and injuries across the life span. Topics include etiology, symptoms, and the physical and psychological reactions to diseases and injury.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisites: Essentials of A&P with Lab (BIOL 10253/BIOL 10151) with a grade of C or higher OR A grade of C or higher in: Anatomy and Physiology I with Lab (BIOL 24003/BIO 24001) AND Anatomy and Physiology II with Lab (BIOL 24103/BIOL 24101).	This course is not currently offered.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the key structure and functional inter-relationships in different body systems.
2. Explain the role of the body's normal defenses and altered immune responses.
3. Describe diseases of the white blood cells, red blood cells, and platelets.
4. Explore alterations resulting in decreased cardiac output and altered tissue perfusion.
5. Analyze infectious, ventilation, and perfusion disorders of the respiratory system.
6. Discuss normal electrolyte functions and normal pH regulation, as well as electrolyte and acid-base disorders.
7. Compare renal alterations that alter urinary elimination and impaired renal function.
8. Describe congenital and other disorders of the reproductive system.
9. Identify and contrast disorders of the upper and lower gastrointestinal system.
10. Compare and contrast disorders of the parathyroid, thyroid, and adrenal glands.
11. Describe and differentiate the types of diabetes mellitus.
12. Explain congenital, traumatic, and vascular neurological disorders.
13. Recognize vascular neurological and chronic degenerative neurologic disorders.
14. Describe congenital and traumatic musculoskeletal disorders.
15. Review metabolic join disorders, inflammatory joint disorders, and chronic muscle disorders.
16. Compare congenital, traumatic, inflammatory, and infectious disorders of the integumentary and sensory systems.
17. Describe and discuss cancers of the various body systems.

18. Describe the various conditions associated with aging in multiple systems.

Anatomy and Physiology I Lab (BIOL 24001)
Emphasizes cell structure; histology of human tissues; anatomy of the integument human skeleton, muscles, and nervous system.
ACTS Equivalent Course ID: BIOL 2404 Human Anatomy and Physiology I. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisites: A grade of C or higher in ENGL 00203 or English Composition I (ENGL 10103) OR ACT Reading score of 19 or equivalent placement score OR ACT Reading score 13-18 with approved HS GPA 3.25 or higher and HS English 12 grade of B or higher. Corequisite: Anatomy and Physiology I (BIOL 20003)	Fall Spring Summer	Lecture: 0 Lab: 2	1

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify general anatomical terminology, major organ locations, tissue types, and components of the integumentary, skeletal, muscular, and nervous systems and participate in dissections.
2. Describe the structure and function of cells, including transport mechanisms, mitotic stages, and the roles of tissues and membranes in maintaining homeostasis.
3. Identify the classification and function of bones, joints, muscle tissue, and nervous structures, including the spinal cord, brain, cranial nerves, and reflexes.
4. Explain the basic principles of microscopy, muscle contraction, neural signaling, and sensory function, including electroencephalograms and reflex classification.

The course will explore the following topics in pursuit of these Outcomes:

- General body organization and function
- Basic biochemistry
- Cellular structure and function
- Metabolism
- Histology
- Integumentary system
- Skeletal system
- Joints
- Muscular system
- Nervous system
- Special senses

- Digestive system
- Reproductive system
- Blood
- Cardiovascular system
- Endocrine system
- Lymphatic system
- Respiratory system
- Urinary/excretory system
- Proper use of a microscope, other lab equipment, and lab techniques

Anatomy and Physiology I (BIOL 24003)
The first course of a two-semester sequence. Topics include anatomical terminology, basic biochemistry, cellular biology, histology, the structure and function of the integumentary, skeletal, muscular, and nervous systems.
ACTS Equivalent Course ID: BIOL 2404 Human Anatomy and Physiology I. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisites: ENGL 00203 with a grade of C or higher OR English Composition I (ENGL 10103) with grade of C or higher OR ACT Reading score 19 or equivalent placement score OR ACT Reading score 13-18 with approved HS GPA 3.25 or higher and HS English 12 grade of "B" or higher. Corequisite: Anatomy and Physiology I Lab (BIOL 20001)	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Identify general body landmarks, planes, and orientations.
2. Classify types of matter, compounds, and their functions in human biological chemistry.
3. Describe the structure and function of cells, cell membrane transport, tissue types, and the integumentary system, including its role in maintaining homeostasis.
4. Explain the structure, function, and homeostatic imbalances of the skeletal, joint, and muscular systems, including muscle mechanics and classification.
5. Summarize the fundamentals of nervous tissue, the central, peripheral, and autonomic nervous systems.
6. Describe neural integration to basic physiological processes.

This course will explore the following topics in pursuit of these Outcomes:

- General body organization and function
- Basic biochemistry
- Cellular structure and function
- Metabolism
- Histology

- Integumentary system
- Skeletal system
- Joints
- Muscular system
- Nervous system
- Special senses
- Digestive system
- Reproductive system
- Blood Cardiovascular system
- Endocrine system
- Lymphatic system
- Respiratory system
- Urinary/excretory system

Anatomy and Physiology II Lab (BIOL 24101)
Emphasizes reflexes and sensation, special senses, hematology, anatomy of the heart, circulatory system, respiratory, digestive, urinary, and reproductive systems, ECGs, and urinalysis.
ACTS Equivalent Course ID: BIOL 2414 Human Anatomy and Physiology II. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisites: Anatomy and Physiology I with Lab (BIOL 24003/BIOL 24001) with a grade of C or higher. Corequisite: Anatomy and Physiology II (BIOL 24103)	Fall Spring Summer	Lecture: 0 Lab: 2	1

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify the anatomy and evaluation tests of special sense organs, endocrine system structures, and blood components and participate in dissections.
2. Label the anatomy of the heart, blood vessels, and selected circulations, and summarize procedures for measuring and interpreting blood pressure and pulse.
3. Classify the anatomy of the respiratory, digestive, urinary, and reproductive systems, and describe the factors affecting their physiological functions.
4. Outline the anatomy and processes involved in embryonic development and recognize evaluation tests related to the urinary and reproductive systems.

The course will explore the following topics in pursuit of these Outcomes:

- General body organization and function
- Basic biochemistry
- Cellular Structure and function
- Metabolism
- Histology
- Integumentary system
- Skeletal system
- Joints
- Muscular system
- Nervous system
- Special senses
- Digestive system
- Reproductive system
- Blood
- Cardiovascular system
- Endocrine system
- Lymphatic system
- Respiratory system
- Respiratory system
- Urinary/excretory system
- Proper use of a microscope, other lab equipment, and lab techniques.

Anatomy and Physiology II (BIOL 24103)
The second course of a two-semester sequence. Covers the structure and functions of the following systems: special senses, endocrine, circulatory, lymphatic, immune, respiratory, digestive, urinary, and reproductive. Nutrition and metabolism are also covered.
ACTS Equivalent Course ID: BIOL 2414 Human Anatomy and Physiology II. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisites: Anatomy and Physiology I with Lab (BIOL 24003/BIOL 24001) with a grade of C or higher. Corequisite: Anatomy and Physiology II Lab (BIOL 24101)	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the structure, function, and common homeostatic imbalances of the special senses and endocrine system.
2. Explain the components and functions of blood, the processes of blood cell production and clotting, and the effects of homeostatic imbalances.
3. Summarize the mechanisms of heart contraction, blood pressure regulation, capillary dynamics, and associated homeostatic imbalances.
4. Apply knowledge of the structure and function of the digestive, urinary, fluid balance, and reproductive systems to analyze metabolic processes and homeostatic imbalances.

Legal Environment of Business (BLAW 20003)
Introduction to the American legal system as it applies to the environment in which businesses operate.
ACTS Equivalency Course ID: BLAW 2003 Legal Environment of Business.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify and recall key laws related to business operations.
2. Apply relevant business practices and laws to common business transactions, contractual obligations, and real-world scenarios.
3. Interpret legal principles to analyze and solve basic business law problems using provided data.
4. Explain key theories and concepts of business law.

Introduction to Entrepreneurship (BUSI 10033)
An introduction to the role of entrepreneurial businesses in the US, the impact of entrepreneurial businesses on the US and global economy, how ideas become businesses, how intrapreneurs operate within a company and the general precepts on entrepreneurial businesses.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	This course is only offered to students enrolled in the Entrepreneurship degree program and is scheduled when required for a student's progression in the program.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Explain effective leadership and distinguish between leadership and management, identifying key leadership behaviors and characteristics of successful leaders.
2. Evaluate different leadership styles and assess their impact on motivation, team development, and organizational effectiveness.
3. Analyze how effective leaders develop, coach, and motivate individuals, while utilizing strategies to recognize and interact with different personality types in the workplace.
4. Develop the ability to set organizational goals and objectives, aligning them with the organization's mission, and identifying strategies for achieving them.
5. Apply effective leadership strategies to identify problems, make decisions, and transition from employee to supervisor, addressing challenges in leadership decision-making and problem-solving.

Entrepreneurship Strategies and Tools (BUSI 20053)
This course focuses on the intersection of entrepreneurial strategy and emerging technology. Students will explore how to identify opportunities through market analysis and learn to augment decision-making using modern tools, including artificial intelligence. By applying proven frameworks to real-world hurdles—from securing capital to optimizing operations—students will develop strategic skills that can lead to a competitive advantage.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Analyze entrepreneurial opportunities by assessing market trends, customer needs, and competitive landscapes to determine the feasibility of new venture ideas.
2. Evaluate how emerging tools such as artificial intelligence can enhance market research, customer discovery, and competitive analysis, and determine their effectiveness in supporting evidence-based entrepreneurial decision-making.
3. Apply entrepreneurial frameworks to develop evidence-based solutions to common startup challenges, including financing, operations, and marketing.
4. Investigate planning approaches that integrate opportunity assessment, business modeling, marketing strategy, financial projections, and risk analysis.

Introduction to Business (BUSI 10103)
This course provides foundational knowledge across key business disciplines, including management, marketing, finance, accounting, and economics. Students will develop skills in analyzing financial data, calculating profit, and understanding business law and ethics while learning to recognize market opportunities and make informed investment decisions. This course emphasizes practical application, demonstrating how various business functions operate in both daily life and professional settings.
ACTS Equivalency Course ID: BUSI 1013 Introduction to Business.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply foundational knowledge in management, marketing, finance, accounting, and economics.
2. Apply foundational knowledge on how to calculate profit, analyze financial data, and utilize accounting statements.
3. Recognize market opportunities, manage resources, and make informed investments decisions.
4. Analyze business law and ethical considerations.
5. Demonstrate how various business functions operate in daily life and professional settings.

Computer Software Applications (BUSI 10563)
Provides instruction in the use of word processing, electronic spreadsheet, database, and presentation software for microcomputers. Students will become more familiar with microcomputer operations, operating systems and ways of solving everyday problems with word processing, electronic spreadsheet, database, and presentation software programs.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fallb	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Demonstrate basic functions of productivity tools and use them to create, format, and manage documents, presentations, and data effectively.
2. Create engaging and structured presentations, incorporating tables, charts, and animations to present data effectively.
3. Develop an understanding of formatting and enhancing documents for professional use, including creating tables, graphics, and other elements to improve document presentation.
4. Develop data-driven spreadsheets, applying functions, tables, and charts to analyze and present data clearly.
5. Apply cross-software integration to workplace tasks.

Digital Literacy (BUSI 10663)
This course provides an introduction to the essential skills and knowledge necessary to navigate the digital world with confidence and proficiency. This course will cover a range of topics, including digital literacy, file and media management, communication and collaboration, information literacy and effective online research, cybersecurity and privacy, digital citizenship, and generative AI.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Develop and apply digital literacy skills, including basics of generative AI, to real-world problems.
2. Demonstrate experience with the proper procedures to create documents suitable for coursework, professional purposes, and personal use.
3. Evaluate sources for credibility and reliability in online research.
4. Demonstrate proficiency in the fundamentals of Microsoft Word 2019.
5. Demonstrate effective communication and collaboration in the digital world.
6. Apply principles of online security and privacy to protect personal information.

Professional Selling/Advertising (BUSI 20033)
A course specifically designed to teach the tools of professional selling and advertising methods to students. Students will learn successful sales techniques for retail and non-retail customers. Students will also learn to develop an advertising program for products and services and the appropriate medium to use.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisites: Introduction to Entrepreneurship (BUSI 10033) AND English Composition I (ENGL 10103) AND Principles of Marketing (MKTG 25183)	This course is only offered to students enrolled in the Entrepreneurship degree program and is scheduled when required for a student's progression in the program.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Analyze different styles of managing conflict and assess their effectiveness in resolving workplace disputes.
2. Demonstrate ethical decision-making by choosing appropriate actions in situations requiring the application of business ethics.
3. Evaluate delegation and work assignment techniques to ensure fair and effective task distribution while minimizing potential conflicts.
4. Integrate decision-making strategies into conflict resolution processes.
5. Design conflict resolution frameworks that align with human resources responsibilities.

Business Communications (BUSI 20103)
This course develops essential business communication skills, focusing on written and oral communication, professional writing for resumes and cover letters, research and citation methods, and effective strategies for the employment search process.
ACTS Equivalency Course ID: BUSI 2013 Business Communications

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: English Composition I (ENGL 10103)	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Demonstrate knowledge of business communication principles, including written and oral communication.
2. Develop an understanding of effective writing skills and apply those skills to create resumes and cover letters.
3. Engage in professional oral communication in both individual and group discussions and presentations.
4. Apply proper research and citation methods in business communications.
5. Demonstrate an understanding of the employment search process and generate effective employment documents.

Business Statistics (BUSI 21003)
Descriptive and inferential statistical techniques and methods in business are taught. Topics include qualitative data analysis, frequency distributions, numerical methods, data dispersions, variance analysis, estimation theory, sampling distributions, discrete and continuous probability distributions, hypothesis testing and confidence interval estimation.
ACTS Equivalency Course ID: BUSI 2103 Business Statistics.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: A grade of C or higher in: College Algebra (MATH 11003) OR Quantitative Literacy (MATH 11103).	Fall Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Compute and interpret data using measures of central tendency and dispersion.
2. Organize raw data into frequency tables, frequency distributions, and analyze with graphic presentations.
3. Compute basic probability.
4. Construct confidence intervals.
5. Conduct a single sample hypothesis test.

Core concepts include:

- Sampling distribution
- Discrete and continuous probability

Business Ethics (BUSI 21143)
This course explores ethical decision-making in the workplace, equipping students with the knowledge of major ethical theories, corporate social responsibility, and professional codes of ethics while developing critical thinking and communication skills to assess and address real-world ethical dilemmas.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Recognize and evaluate common ethical dilemmas in the workplace, considering factors such as legal requirements, stakeholder impact, and personal values.
2. Demonstrate understanding of major ethical theories, including utilitarianism, virtue ethics, and stakeholder theory, to guide ethical decision-making.
3. Assess corporate ethical conduct, including adherence to professional codes of ethics and corporate social responsibility in environmental, social, and economic contexts.
4. Effectively communicate ethical concerns to stakeholders and understand the role of leadership in fostering an ethical workplace culture.
5. Apply ethical principles through case study analysis and develop critical thinking skills to evaluate and address ethical challenges from multiple perspectives.

Feasibility and Funding (BUSI 21303)
This course will provide the essential skills for students to evaluate and explore strategies for entrepreneurial opportunities in the marketplace and to successfully evaluate the funding and feasibility of those opportunities.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Principles of Accounting I (ACCT 10003) AND Introduction to Entrepreneurship (BUSI 10033) AND English Composition I (ENGL 10103)	This course is only offered to students enrolled in the Entrepreneurship degree program and is scheduled when required for a student's progression in the program.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify, describe, and/or apply basic items included in a feasibility analysis.
2. Develop, plan, and implement a feasibility analysis for a small business.
3. Understand the definitions of bootstrapping, bank loans, SBA guarantees, equity investments, and venture capital and their inherent philosophies.
4. Explain the various reasons that entrepreneurs use each of these financing methods to start or continue their business ventures.
5. Understand the forces that determine the time to breakeven.
6. Understand the general administrative expenses of a business and how to provide cost savings for their business.
7. Understand the variable and fixed costs of a business and how to manage those costs.
8. Examine the commonalities between the different sources of start-up funding.
9. Understand the problems and limitations of a business owner's use of credit cards.
10. Examine techniques to help optimize the management of cash flow in an entrepreneurial venture.

Principles of Finance (BUSI 22543)
This course introduces the fundamental concepts of finance, focusing on key financial statements, financial management processes, and ethical decision-making. Students will develop analytical skills to assess financial performance and apply financial techniques to strategic resources management. Emphasis is placed on understanding the role of finance in effective business decision-making and the ethical considerations that shape financial practices.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify the core concepts of finance.
2. Analyze key financial statements.
3. Identify the processes and structures of financial management.
4. Recognize the ethical considerations in financial decision-making.
5. Demonstrate an understanding of financial techniques related to strategic resource management and decision-making.

Internship (BUSI 26543)
This course prepares students for a successful transition from school to work by developing professional written materials, job search strategies, and essential workplace behaviors. Students will enhance their research, analytical, and communication skills while adhering to professional standards of conduct and performance. The course also emphasizes self-reflection on career readiness, fostering growth through internship experiences and goal setting for future career development. Students will spend 80 hours on-the-job training during the semester. Students take this course in the final semester of the degree program.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Develop professional written materials and demonstrate professional behaviors needed for an effective job search and transition from school to work.
2. Demonstrate workplace professionalism by adhering to employer and instructor expectations regarding attendance, punctuality, appropriate attire, and job performance.
3. Demonstrate research and analytical skills by effectively gathering, evaluating, and applying relevant information in a professional setting.
4. Demonstrate the ability to speak and conduct oneself professionally in correlation with the UACCB student code of conduct.
5. Reflect and evaluate professional growth and career readiness by assessing internship experiences, identifying strengths and areas for improvement, and setting future career goals.

Small Business Management (BUSI 27543)
Capstone course designed for students to apply what they have learned in other courses about the issues involved in organizing and operating a small business. Topics include personal qualifications, small business techniques, capital requirements, and forms of organizations, location, and sources of assistance.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Principles of Accounting I (ACCT 10003)	This course is only offered to students enrolled in the Entrepreneurship degree program and is scheduled when required for a student's progression in the program.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Students will demonstrate general and specific knowledge of small business management principles, issues, and concerns.
2. Students will demonstrate awareness of small business issues in the current media and literature.
3. Students will demonstrate the ability to analyze small business events and issues.
4. Students will demonstrate knowledge of and the ability to compose and present a business plan.

System Security (CESC 21003)
This course covers the holistic concept of a cyber system of people, processes, technology and data organized as a unit, understanding how to develop security requirements and selection of controls to meet requirements. This course also addresses the security issues of connecting components and using them within larger systems.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Introduction to Cybersecurity (CESC 22363) AND Fundamentals of Programming (CPSI 21563)	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe what a cyber system is and how its parts work together.
2. Analyze the security needs of a cyber system, including identifying ways to protect it from threats.
3. Outline/Explain the steps in the security engineering lifecycle.

Introduction to Cybersecurity (CESC 22363)
This course introduces general cybersecurity principles for major or non-majors. This includes understanding cybersecurity offense and defense, the role of cybersecurity professionals, and legal and ethical principles.
ACTS Equivalency Course ID: CSEC 1303 Introduction to Cybersecurity.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the principles of confidentiality, integrity, and availability.
2. Identify risks, threats, attacks, and vulnerabilities related to cybersecurity.
3. Explain how cybersecurity professionals use technologies, processes, and procedures.
4. Recognize the application of legal and ethical principles related to cybersecurity.

Network Security (CESC 22433)
In this course students will learn to analyze security threats to modern networks and the methods used to secure networks against these threats.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: System Security (CESC 21003)	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe key theories, principles, and terms used in network security.
2. Identify common network security threats including how to detect, report, and respond to them.
3. Explain how firewalls work and how they are set up in a network environment.
4. Configure and test basic VPN connections for secure communication.

Concepts of Chemistry Lab (CHEM 12131)
Laboratory to support and reinforce the topics covered in CHM 12143 Concepts of Chemistry. Students will learn how to safely use laboratory equipment and carry out experiments.
ACTS Equivalency Course ID: CHEM 1214 Chemistry I for Health Related Professions. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite: Concepts of Chemistry (CHEM 12143)	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 0 Lab: 3	1

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply the scientific method of problem solving to problems in the lab.
2. Use common chemistry lab glassware safely.
3. Perform reactions and write the correctly balanced chemical equations.
4. Examine the properties of acids, bases, and salts and tell the difference between each.
5. Use molecular models to correctly construct simple compounds and write correct chemical formulas.
6. Understand the organization of the Periodic Table and its use in chemistry.

Concepts of Chemistry (CHEM 12143)
One semester course providing a foundation in chemical terminology and principles. The course introduces concepts including but not limited to dimensional analysis, intermolecular interactions, gases, mixtures, kinetics, equilibrium and acid base chemistry. This course is designed for Nursing and other Allied Health majors. The course may also satisfy the general education Physical Science requirements. The course may also satisfy the requirements of other majors and may be used as a Prerequisite to College Chemistry I/Lab. The course does not satisfy the chemistry requirement for chemistry or biology majors.
ACTS Equivalency Course ID: CHEM 1214 Chemistry I for Health Related Professions. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisites: Essentials of Math (MATH 02043) with a grade of C or higher OR College Algebra (MATH 11003) with a grade of C or higher OR ACT Math score of 17 or higher OR Equivalent placement test score. Corequisite: Concepts of Chemistry Lab (CHEM 12131)	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to explain, describe, discuss, recognize, and/or apply knowledge and understanding of the following topics:

1. The Scientific Method
2. Measurement and dimensional analysis
3. The different states of matter
4. Electronic structure of the atom
5. Organization of the Periodic Table
6. Inorganic nomenclature in society
7. The bonding of atoms
8. Chemical reactions
9. Gas Laws
10. Acids, bases, and buffers
11. Solutions
12. The significance of chemistry

College Chemistry I Lab (CHEM 14101)
In addition to being a course to support the Corequisite lecture class, this laboratory course will provide students with the opportunity to learn and practice working safely in a laboratory. Students will also become comfortable working with common chemical glassware and conduct experiments that illustrate the concepts covered in the lecture class.
ACTS Equivalency Course ID: CHEM 1414 Chemistry I for Science Majors. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite: College Chemistry I (CHEM 14103)	Fall	Lecture: 0 Lab: 3	1

Course Learning Outcomes By the end of this course, students will be able to:

1. Demonstrate and practice laboratory safety.
2. Apply the scientific method, significant figure rules, and dimensional analysis to collect data from experiments and draw evidence-based conclusions.
3. Conduct experiments following prescribed instructions to collect data, and then draw conclusions concerning:
    a. atomic structure;
    b. the behavior of gases;
    c. energy changes during chemical reactions;
    d. chemical behavior and compound formation;
    e. chemical nomenclature;
    f. stoichiometric relationships in chemical reactions; and
    g. types of chemical reactions.
4. Apply significant figure rules to perform and report accurate scientific calculations in laboratory experiments and problem-solving exercises.
5. Use correct chemical terminology and chemical principles when writing lab reports based upon experiments conducted in the laboratory.

College Chemistry I (CHEM 14103)
Algebra-based chemistry course applicable for chemistry and other science majors, and pre-professional students. This is the first course of a two-course sequence. Course content provides a foundation for work in advanced chemistry and related sciences. The course includes in-depth study of nomenclature, atomic and molecular structure, stoichiometry, bonding, chemical reactions, gases and nuclear chemistry.
ACTS Equivalency Course ID: CHEM 1414 Chemistry I for Science Majors. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Essentials of Math (MATH 02043) with a grade of C or higher OR ACT Math score of 16 or higher or equivalent placement test score. Recommended completion of College Algebra (MATH 11003). Corequisite: College Chemistry I Lab (CHEM 14101)	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Use the scientific method, significant figure rules, and dimensional analysis to collect data, perform accurate calculations, and draw evidence-based conclusions.
2. Describe the components and structure of the atom, determine electron configurations, and use periodic trends to predict chemical behavior and compound formation.
3. Identify and distinguish between ionic, covalent, and metallic bonds; apply bonding theories; and correctly name elements and inorganic compounds.
4. Write balanced chemical and nuclear equations, apply solubility rules, and explain reactions using appropriate chemical principles and terminology.
5. Apply gas laws and kinetic molecular theory to describe gas behavior; explain energy changes in physical and chemical processes; and perform calculations involving heat, temperature, and nuclear mass defects.

College Chemistry II Lab (CHEM 14201)
A laboratory experience to support CHEM 14203 College Chemistry II.
ACTS Equivalency Course ID: CHEM 1424 Chemistry II for Science Majors. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite: College Chemistry II (CHEM 14203)	Spring	Lecture: 0 Lab: 3	1

Course Learning Outcomes By the end of this course, students will be able to explain, describe, discuss, recognize, and/or apply knowledge and understanding of the following topics:

1. Safely conduct laboratory experiments by applying proper chemical handling techniques, using equipment correctly, and adhering to safety protocols.
2. Identify unknown compounds and analyze the effects of intermolecular forces on solution properties using standard laboratory techniques and data analysis and reporting.
3. Assemble and test galvanic cells, measure cell potentials, and interpret data to understand electrochemical principles.
4. Perform acid/base titrations, investigate reaction kinetics and mechanisms, and assess equilibrium shifts using experimental data and Le Chatelier's Principles.

Topics will Include:

- Intermolecular forces
- Properties of solutions
- Thermodynamics
- Chemical Kinetics
- Mechanisms of chemical reactions
- Acid/base theory
- Equilibrium of Chemical reactions, including solubility
- Equilibrium of acid/base mixtures, including titration
- Oxidation-reduction
- Electrochemistry

College Chemistry II (CHEM 14203)
The second course of a two-semester sequence for chemistry majors and pre-professional students. Concepts covered include liquids, solutions, solids, acids, bases, salts, redox reactions, thermodynamics, kinetics, and equilibrium reactions.
ACTS Equivalency Course ID: CHEM 1424 Chemistry II for Science Majors. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisites: College Chemistry I with Lab (CHEM 14103/CHEM 14101) AND College Algebra (MATH 11003) Corequisite: College Chemistry II Lab (CHEM 14201)	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the role of intermolecular forces in determining solubility, vapor pressure, and phase changes, and predict solution behavior using acid-base and solubility principles.
2. Calculate entropy, enthalpy, and Gibbs free energy changes to determine the spontaneity of chemical reactions and predict equilibrium shifts.
3. Apply equilibrium constant, stoichiometric principles, and Le Chatelier's Principle to predict reaction direction and calculate equilibrium concentrations for acid-base and precipitation reactions.
4. Construct and analyze galvanic cells by measuring voltage, calculating cel potentials, and applying electrochemical equations to predict redox reaction spontaneity.
5. Interpret experimental data to determine rate laws, reaction order, and activation energy, and predict reaction rate changes based on temperature, concentration, and catalysts.

Topics will Include:

- Intermolecular forces
- Properties of solutions
- Thermodynamics
- Chemical Kinetics
- Mechanisms of chemical reactions
- Acid/base theory
- Equilibrium of Chemical reactions, including solubility
- Equilibrium of acid/base mixtures, including titration
- Oxidation-reduction

- Electrochemistry

Cosmetology I (COSM 10118)
This course is the first in a series of three courses required to prepare persons to take the Arkansas State Board of Health's Cosmetology Section's cosmetology state licensure examination. Major topics include hygiene and sanitation; related sciences; and hairdressing.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 4 Lab: 14	18

Course Learning Outcomes

1. Hygiene and Sanitation – 80 hours long dash instructions in sanitation, sterilization, hygiene, lighting and ventilation. General sanitation duties performed by students shall not exceed more than 15 minutes per day. Students are required to maintain their stations as warranted and are responsible for their actions and mishaps.
2. Related Science – 120 hours – Physiotherapy or Cosmetricity (pertaining to electricity used in cosmetology), Physiology and Histology, Anatomy, Neurology, Myology, and Osterology.
3. Hairdressing – 100 hours – a course in cleaning hair, shampooing, hair cutting, clipping, signeing, dying, tinting, bleaching, scalp massage, brushing and combining, curling, permanent waving, and reconditioning hair, wiggery, thermal pressing, iron curling, chemical relaxing, etc.
4. Manicuring – 100 hours – a course in the construction, filling and shaping of the fingernails, loosening and removing the dead cuticle, and the art of hand and arm massage.
5. Aesthetics – 100 hours – a course in the skin, various kinds of facial massage, cosmetics, packs, the art of makeup, eyebrow arching, eyebrow and eyelash dying.
6. Salesmanship and Shop Management – 50 hours – instruction in how to keep records, knowledge of business law, cosmetology law, rules and regulations, booking appointments, retailing, etc.
7. Shop Deportment – 50 hours – courtesy, neatness and professional attitude and meeting the public.

Cosmetology II (COSM 10218)
This course is the second in a series of three courses required to prepare persons to take the Arkansas State Board of Health's Cosmetology Section's cosmetology state licensure examination. Major topics include manicuring, aesthetics and hairdressing.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 4 Lab: 14	18

Course Learning Outcomes

1. Hygiene and Sanitation – 80 hours – instructions in sanitation, sterilization, hygiene, lighting and ventilation. General sanitation duties performed by students shall not exceed more than 15 minutes per day. Students are required to maintain their stations as warranted and are responsible for their actions or mishaps.
2. Related science – 120 hours – Physiotherapy or Cosmetricity (pertaining to electricity used in cosmetology), Physiology and Histology, Anatomy, Neurology, Myology, and Osteology.
3. Hairdressing - 1000 hours - a course in cleaning hair, shampooing, hair cutting, clipping, signeing, dying, tinting, bleaching, scalp massage, brushing and combing, curling, permanent waving, and reconditioning hair, wiggery, thermal pressing, iron curling, chemical relaxing, etc.
4. Manicuring - 100 hours - a course in the construction, filing and shaping of the fingernails, loosening and removing the dead cuticle, and the art of hand and arm massage.
5. Aesthetics - 100 hours - a course in the skin, various kinds of facial massage, cosmetics, packs, the art of makeup, eyebrow arching, eyebrow and eyelash dying.
6. Salesmanship and Shop Management - 50 hours - instruction in how to keep records, knowledge of business law, cosmetology law, rules and regulations, booking appointments, retailing, etc.
7. Shop Deportment - 50 hours - courtesy, neatness and professional attitude and meeting the public.

Cosmetology III (COSM 13006)
This course is the final course in a series of three courses required to prepare persons to take the Arkansas State Board of Health's Cosmetology Section's cosmetology state licensure examination. Major topics include salesmanship and shop management; shop deportment; and hairdressing.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Summer	Lecture: 1 Lab: 5	6

Course Learning Outcomes

1. Hygiene and Sanitation - 80 hours long dash instructions in sanitation, sterilization, hygiene, lighting and ventilation. General sanitation duties performed by students shall not exceed more than 15 minutes per day. Students are required to maintain their stations as warranted and are responsible for their actions or mishaps.
2. Related Science - 120 hours - Physiotherapy or Cosmetricity (pertaining to electricity used in cosmetology), Physiology and Histology, Anatomy, Neurology, Myology, and Osteology.
3. Hairdressing - 1000 hours - a course in cleaning hair, shampooing, hair cutting, clipping, signeing, dying, tinting, bleaching, scalp massage, brushing and combing, curling, permanent waving, and reconditioning hair, wiggery, thermal pressing, iron curling, chemical relaxing, etc.
4. Manicuring - 100 hours - a course in the construction, filing and shaping of the fingernails, loosening and removing the dead cuticle, and the art of hand and arm massage.
5. Aesthetics - 100 hours - a course in the skin, various kinds of facial massage, cosmetics, packs, the art of makeup, eyebrow arching, eyebrow and eyelash dying.
6. Salesmanship and Shop Management - 50 hours - instruction in how to keep records, knowledge of business law, cosmetology law, rules and regulations, booking appointments, retailing, etc.
7. Shop Deportment - 50 hours - courtesy, neatness and professional attitude and meeting the public.

Cosmetology Instructor I (COSM 21009)
This course is the first in two courses required as a prerequisite to qualify for cosmetology instructor licensure examination by the Arkansas Department of Health Cosmetology Section.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Must be a licensed cosmetologist.	This course is only offered to students enrolled in the Cosmetology Instructor degree program and is scheduled when required for a student's progression in the program.	Lecture: 2 Lab: 7	9

Course Learning Outcomes By the end of this course, students will be able to:

1. Demonstrate technical skills in hair, skin, and nail care, and effectively teach these techniques to aspiring cosmetologist.
2. Apply principles of learning theory and effective teaching methodologies to create lesson plans and classroom experiences for cosmetology students.

Cosmetology Instructor II (COSM 22009)
This course is the second of two courses which includes the second 300 practical hours of 600 total needed to complete this certificate program. This course is required as a prerequisite to qualify for the cosmetology instructor licensure examination by the Arkansas Department of Health Cosmetology Section.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Cosmetology Instructor I (COSM 21009)	This course is only offered to students enrolled in the Cosmetology Instructor degree program and is scheduled when required for a student's progression in the program.	Lecture: 2 Lab: 7	9

Course Learning Outcomes By the end of this course, students will be able to:

1. Demonstrate technical skills in hair, skin, and nail care, and effectively teach these techniques to aspiring cosmetologist.
2. Apply principles of learning theory and effective teaching methodologies to create lesson plans and classroom experiences for cosmetology students.

Introduction to Computers (CPSI 10003)
Provides a fundamental orientation regarding what computers are and what they can do. Topics include computer hardware, data input and output, data representation, auxiliary storage, data files, operating systems, and application of software.
ACTS Equivalency Course ID: CPSI 1003 Introduction to Computers.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Explain the basic theories, principles, and core concepts that describe how computers work.
2. Use correct computer and technology terms when discussing hardware, applications, software, file management, and systems.
3. Demonstrate how to use tools like word processors, spreadsheets, databases, and presentation programs.
4. Describe the main functions of an operating system and perform basic tasks using system utilities and file management tools.
5. Describe what the internet is, how it connects with computers, and its impact on everyday life.

Introduction to Computer Science (CPSI 10103)
This course introduces students to computer science, emphasizing professional readiness and computational thinking through programming, data analysis, and visualization. Students will also explore core concepts of systems, networks, cybersecurity, and the societal impact of emerging technologies.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Understand professional roles, responsibilities, and expectations within the computer science domain.
2. Apply computational thinking to design and implement text-based programs that solve real-world problems using proper coding practices and clear documentation.
3. Develop text-based programs that analyze and visualize data and communicate findings clearly while recognizing potential biases in the data.
4. Analyze established and emerging technologies to evaluate their current and potential impacts on computer science, industry, and society.
5. Explain core concepts of computer systems, networks, and cybersecurity, and describe their role in protecting information in the digital world.

Survey of Computer Technology (CPSI 10363)
Introduces modern technology across multiple disciplines, technology professions, and career opportunities, as well as fundamental skills necessary for success in the computer technology field.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Explain how technology is used in different fields such as business, healthcare, science, and education.
2. Explore careers in computer technology including describing the roles and responsibilities of different professions.
3. Practice skills like time management, communication, and problem-solving to help you succeed in computer technology classes and jobs.

User Interface/Human Interaction (CPSI 12063)
This course studies human factors of interactive software, interactive styles, design principles and considerations, development methods and tools, interface quality and evaluation methods.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Explain key terms and ideas related to how people interact with computers (human-computer interaction).
2. Describe the basic principles used to design user-friendly interfaces.
3. Evaluate how human cognitive, perceptual, and behavioral factors influence interaction with computer systems.

Database Fundamentals (CPSI 20263)
This course introduces students to database design, management concepts, and theory. SQL and NoSQL databases will be covered.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Explain the basic ideas and terms used in databases, such as tables, fields, and relationships.
2. Create database designs using tools like diagrams to show how data is organized.
3. Write queries to search for and retrieve information from a database, including improving them to get results faster and more accurately.

Emerging Trends in Technology (CPSI 21063)
This course explores the current and potential future impacts of new, emerging, and rapidly evolving technologies on organizations and their operations across a range of industries and sectors. The use and impact of Artificial Intelligence and Machine Learning will be covered in this course.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify key emerging technologies.
2. Describe the potential impacts of new technologies.
3. Apply basic concepts of emerging technologies to analyze real-world scenarios.

Computer Technology Capstone (CPSI 21163)
Culminating project-based experience that applies the knowledge and skills developed in previous courses towards the design, implementation, testing, documentation, and presentation of a specific idea, task, or product. Each student's specific outcomes will depend on the skills that they bring to the course and the type of project that they participate in.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify foundational concepts, tools, and techniques learned in previous coursework that are relevant to the project.
2. Select and implement suitable tools, techniques, and workflows to complete project tasks effectively.
3. Design, develop, and present a final product that integrates prior knowledge and skills into a cohesive solution to a defined problem or task.

Fundamentals of Programming (CPSI 21563)
This course covers the fundamentals of modern programming by introducing students to basic programming techniques, data types, functions, arrays, problem analysis and programming methodologies.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: A grade of C or higher in: Technical Mathematics (MATH 10103), College Algebra (MATH 11003), or Quantitative Literacy (MATH 11103) OR ACT score of 17 or equivalent placement test score.	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Explain the main ideas of object-oriented programming, like classes, objects, inheritance, and encapsulation.
2. Write code using object-oriented programming to build simple programs.
3. Design programs by planning how the code will be structured and how different parts will work together.

Computer Ethics (CPSI 22063)
This course introduces the fundamental ethical, legal and social issues and questions in computer science that call for ethical analysis.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Explain basic ethical issues that can happen in different types of business situations.
2. Discuss the challenges business owners face when making ethical and practical decisions.
3. Identify legal and ethical issues related to using technology in the workplace.

Fundamentals of Web Development (CPSI 22563)
This course will cover the creation of modern, standards-compliant websites using HTML, CSS, and JavaScript, as well as an introduction to the structure of the Internet and the software used for website development.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Create basic websites using web design and development tools, following industry best practices for layout, structure, and accessibility.
2. Explain how the Internet is organized, including how websites are structured and how to navigate and use web resources effectively.
3. Use documentation and technical references to support web development tasks and solve common problems during the design process.

Access Control (CPSI 23263)
This course covers logical and physical access control policies and mechanisms for cyber systems, as well as the role of authorization, identification, authentication, and monitoring in access control.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: System Security (CESC 21003)	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe key concepts in access control, including identity, authentication, and authorization.
2. Explain how physical and logical access controls help protect cyber systems.
3. Analyze access control processes and methods for monitoring and auditing system access.
4. Identify common access control attacks including proposing ways to reduce or prevent them.

Fundamentals of Networking (CPSI 25063)
In this course students will learn the fundamental knowledge needed to design, configure, and implement a Local Area Network.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the basic ideas behind how computer networks work, including how devices connect and share information.
2. Explain how data is kept safe during transmission and how authentication helps protect access.
3. Demonstrate how routing works to move data between different networks.
4. Explain what wide area networks (WANs) are and how they are used to connect networks across long distances.

JavaScript Fundamentals (CPSI 26063)
This course is an introduction to JavaScript language and provides students with how JavaScript is used as a popular technology for both client side and server-side applications, as well as a general scripting language for other applications.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Fundamentals of Web Development (CPSI 22563)	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Create basic websites using web design and development tools.
2. Write/run simple programs and scripts to solve problems or complete tasks.
3. Test/troubleshoot code and websites for errors and common problems to improve performance.

Survey of Programming Languages (CPSI 28063)
In this course, students will create the same project in multiple modern programming languages. Students will gain an understanding of the strengths and weaknesses of the languages and, ultimately, understand the benefits of being programming language agnostic when approaching programming projects.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Fundamentals of Programming (CPSI 21563)	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Write and test code to perform basic programming tasks using appropriate syntax and logic.
2. Create and manipulate data files to store, retrieve, and organize information efficiently.
3. Demonstrate how to extract, transform, and load data from different sources for use in applications or reports.

Introduction to Criminal Justice (CRJU 10203)
Introduces the student to the history, development, and philosophy of law enforcement, courts, and corrections in a democratic society. An overview of the United States Criminal Justice system is an integral part of this course.
ACTS Equivalency Course ID: CRJU 1023 Introduction to Criminal Justice.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the historical development of the criminal justice system in the United States, including key milestones and influences.
2. Identify the three main components of the criminal justice system: law enforcement, courts, and corrections, and explain the primary functions and responsibilities of each component.
3. Analyze the challenges within the criminal justice system.
4. Evaluate the effectiveness of the criminal justice system in addressing crime and maintaining justice in contemporary society.

Criminology (CRJU 12573)
A study of theories about why people commit crime, organized into three broad categories of criminological theory: 1) sociological, 2) biological, and 3) psychological. The course also examines actual crimes, including: 1) general definitions of various crimes, 2) profiles of typical offenders and victims, 3) the prevalence of various crimes, and 4) where, when, and how selected crimes are committed.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Evaluate and contrast major biological, sociological, and contemporary criminological theories, emphasizing their assumptions and real-world applicability.
2. Apply criminological theories to analyze various types of crimes and patterns of deviant behavior.
3. Identify the primary sources of crime data, including their methodologies and limitations.
4. Explain the relationship between micro-level (individual) and macro-level (societal) factors influencing crime and delinquency.

Criminal Law and Criminal Procedures (CRJU 13003)
This course explores the foundations of criminal law and criminal procedure, including the elements of crimes, legal defenses, and Constitutional protections.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Define key terms and concepts related to the U.S. legal system and the criminal justice process, including criminal statutes, offenses, and constitutional amendments.
2. Explain the elements of a crime, basic legal defenses, and how inchoate offenses (e.g., attempt, solicitation, aiding and abetting) function within the criminal justice system.
3. Apply knowledge of the 4th, 5th, and 6th Amendments to evaluate the constitutionality of police investigations, arrests, and interrogations in hypothetical case scenarios.
4. Analyze the procedural steps in a criminal case from arrest through sentencing and identify how substantive and procedural law interact at each stage.

Criminal Investigations (CRJU 14003)
A study of the fundamentals of criminal investigation, both theory and history; from crime scene to courtroom with an emphasis on techniques appropriate to specific crime scenes.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Explain the theoretical foundations and historical development of criminal investigation, distinguishing between crime scene investigation and forensic science.
2. Apply investigative techniques to analyze crime scenes and to critique real-world case studies with attention to evidence handling and procedural integrity.
3. Describe basic techniques for investigating witnesses and suspects with respect to how false memories can affect witness evidence and confessions.
4. Outline proper procedures for collecting, classifying, and interpreting physical evidence – including class and individual characteristics – especially in the context of specialized crimes such as child abuse, sexual assault, and human trafficking.

Legal Writing (CRJU 25033)
This course provides a working knowledge of the fundamentals of effective legal writing, analysis, and research. Topics include legal briefs and memoranda, case and fact analysis, citation forms, legal writing styles, field note taking techniques, and effective report writing.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply professional legal writing conventions to compose clear and structured documents, including legal briefs, memoranda, and reports.
2. Organize writing through the process of drafting, reviewing, and editing to enhance clarity, precision, and professionalism.
3. Differentiate between various types of legal and criminal justice reports (e.g., policing, corrections, domestic violence, court/legal, paralegal).
4. Analyze case scenarios and fact patterns and produce coherent and persuasive arguments and recommendations based on the appropriate legal standard.

Policing in America (CRJU 26003)
Policing in America focuses on the role of the police in relation to modern culture and society. Students will gain a better understanding of the history of policing; the various types of policing agencies, law enforcement officers, and crimes in the United States; modern law enforcement practices; police adaptation to societal changes; current issues in policing; and the future of policing in America.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the history and necessity of policing in the United States, including its foundational principles.
2. Compare historical law enforcement strategies to modern practices in the United States, emphasizing their evolution over time.
3. Differentiate the roles and responsibilities of local, state, and federal law enforcement agencies.
4. Analyze the evolution of policing, focusing on key developments and their impact on law enforcement today.
5. Evaluate how current societal changes and trends are likely to influence the future of policing.

Soils (CSES 20203)
This course introduces soil properties, fertility, and management with a focus on improving soil health for productive farming. Hands-on labs cover soil testing, amendment application, and erosion control. Emphasizes regenerative practices such as composting, reduced tillage, and cover crops to enhance soil function on working farms.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 2 Lab: 1	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Analyze the impact of tillage and soil cover on erosion and runoff.
2. Describe the different soil types and classifications.
3. Collect soil samples and send them off for testing.
4. Distinguish different types of soil texture by the feel method and use of soil triangle.
5. Evaluate various techniques of soil conservation and management

Basic Carpentry and Masonry (CTTE 10103)

This course introduces the fundamentals of basic carpentry and masonry as they apply to industrial maintenance, construction support, and facility repair operations. Students will develop hands-on skills using common carpentry and masonry tools, including hand and power tools, levels, squares, measuring devices, masonry trowels, mixers, and cutting equipment. Emphasis is placed on job-site safety, blueprint and print reading, layout and measurement, material selection, and construction techniques commonly required for structural repair, equipment foundations, and general facility maintenance.

Students will learn to measure, cut, assemble, and install wood and masonry materials, as well as mix and place concrete, mortar, and grout to specified dimensions and tolerances. The course prepares maintenance personnel to build and repair forms, walls, bases, pads, and structural supports, as well as to perform precision layout work necessary for proper equipment installation and long-term durability. Instruction combines classroom discussion with extensive hands-on practice focused on real-world industrial and maintenance applications. Personal protective equipment (PPE) is required at all times. Safety procedures and proper tool usage are thoroughly explained, continually reinforced, and strictly enforced throughout the course.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Technical Methods (TECH 10153)	Spring	Lecture: 0 Lab: 3	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Demonstrate safe work practices by correctly selecting and using required personal protective equipment (PPE) and following established job-site safety procedures during all carpentry and masonry activities.
2. Interpret basic construction drawings and layouts to accurately measure, mark, and prepare materials for carpentry and masonry projects within specified tolerances.
3. Construct and repair basic carpentry and masonry structures by properly cutting, assembling, and installing wood components and by mixing, placing, and finishing concrete or mortar according to industry-accepted standards.
4. Use hand and power tools effectively to complete assigned carpentry and masonry tasks, producing work that meets instructor-defined quality, accuracy, and structural integrity criteria.

Carpentry I (CTTE 10206)

This course will prepare students to apply technical knowledge and skills to lay out, cut, fabricate, erect, install, and repair wooden structures and fixtures, using hand and power tools. Includes introductory instruction in technical mathematics, framing, construction materials and selection, job estimating, blueprint reading, foundations and roughing-in, finish carpentry techniques, and applicable codes and standards.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	This course is currently offered only to concurrently enrolled high school students.	Lecture: 6 Lab: 0	6

Course Learning Outcomes

By the end of this course, students will be able to:

1. Identify and use basic carpentry tools and materials.
2. Read and interpret blueprints and specifications.
3. Apply safety principles in carpentry work.
4. Understand and apply basic framing techniques.

Compact Track Excavator Operator (CTTE 14004)
The Compact Excavator Operator course is designed for entry-level operators. Training includes classroom and in-the-field activities covering safety, walkaround inspections, the operator's compartment, startup and shutdown procedures, basic operating practices based on industry requirements, and fundamental earthmoving techniques. Students will demonstrate the concepts and skills needed to operate equipment safely and proficiently.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 1	4

Course Learning Outcomes By the end of this course, students will be able to:

1. Demonstrate industry-approved safety practices by identifying potential hazards, adhering to OSHA and industry regulations, and implementing appropriate safety measures during compact excavator operation.
2. Conduct thorough pre-operation and post-operation equipment inspections, identifying defects or maintenance needs, and documenting findings according to industry standards.
3. Operate a compact excavator proficiently by executing startup, shutdown, and basic earthmoving procedures while maintaining control and precision.
4. Apply problem-solving and decision-making skills to adjust excavation techniques based on soil conditions, site constraints, and job requirements.
5. Communicate effectively with worksite personnel using standard hand signals, radio communication, and job-site terminology to ensure safe and efficient excavator operation.

Compact Track Loader Operator (CTTE 14104)

The Compact Track Loader Operator course is designed for entry level operators. Training includes classroom and in-the-field activities covering safety, walkaround inspections, operators' compartment, startup/shut down procedures, basic operating procedures based on industry requirements, and basic earthmoving fundamentals. Students will demonstrate concepts and skills to operate equipment safely and proficiently.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 1	4

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify and implement industry-approved safety procedures, including hazard recognition, regulatory compliance, and risk mitigation during compact track loader operation.
2. Perform a comprehensive pre-operation inspection of a compact track loader, identifying potential issues and verifying readiness for safe operation.
3. Demonstrate proficiency in startup, shutdown, and basic control operations of a compact track loader to complete material handling and earthmoving tasks safely.
4. Demonstrate effective communication and teamwork skills while coordinating with others in a simulated job site environment.

Track Dozer Operator (CTTE 14204)

This course is intended for entry-level operators with less than three years experience operating Track Dozers or related equipment. The objectives of the course are to ensure trainees are competent in general machine maintenance, safe operation, and performing basic excavating procedures. Participants can expect to learn information presented by their instructor online, in-class, and through field demonstrations.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 1	4

Course Learning Outcomes By the end of this course, students will be able to:

1. Inspect and explain the function of major components of a track dozer, including the undercarriage, hydraulic system, and blade assembly.
2. Perform routine maintenance tasks, such as checking fluid levels, lubricating moving parts, and inspecting tracks for wear, in accordance with manufacturer guidelines.
3. Demonstrate safe startup, shutdown, and basic operating procedures for a track dozer, including blade control and maneuvering on various terrain types.
4. Execute basic earthmoving operations, such as grading, slot dozing, and backfilling, while maintaining control and efficiency.
5. Identify and mitigate common safety hazards associated with track dozer operation, including working around slopes, underground utilities, and other heavy equipment.

Crane Operator (CTTE 14303)
This course is designed for entry-level and experienced industrial and construction technicians interested in becoming certified crane operators. The objectives of the course are to ensure trainees are competent in general machine maintenance, safe operation, and performing basic rigging procedures. Although a Commercial Driver's License (CDL) is not a prerequisite for this course, participants are required to possess at least a Class B CDL to drive the crane truck. Participants can expect to learn information presented by their instructor online, in-class and through field demonstrations.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 2 Lab: 1	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify and demonstrate the proper use of personal protective equipment (PPE) and safety protocols for climbing, lifting, rigging, and hoisting in crane operations.
2. Inspect and explain the mechanical, electrical, and hydraulic components of a boom truck to assess operational readiness.
3. Accurately record and interpret data in the equipment logbook to ensure compliance with industry standards and safety regulations.
4. Operate a boom truck safely while maneuvering a suspended load under instructor supervision, following standard operating procedures.
5. Interpret and apply load chart data to determine safe lifting parameters for various rigging scenarios.

Introduction to Data Science (DASC 10003)
This course provides an overview of Data Science. This course includes an introduction to the data science analytics process (data analysis life cycle); the importance of ethics and privacy with data and guidelines; training in and applying critical thinking skills to real-world open-ended problems; communicating conclusions and recommendations to diverse audiences in visual, verbal, and written form; applications to various domains; and knowledge and use of the tools of data science.
ACTS Equivalency Course ID: DASC 1003 Introduction to Data Science.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Demonstrate understanding of the data science analytics process (Data Analysis Life Cycle included).
2. Demonstrate an understanding of the importance of ethics and privacy with data and guidelines and real-world examples.
3. Demonstrate applying critical thinking skills to open-ended problems.
4. Demonstrate communicating results, conclusions, and recommendations with diverse audiences.
5. Demonstrate basic knowledge of the application domains for data science: medical sciences & healthcare, bioinformatics, agriculture, cybersecurity, business, education.
6. Demonstrate knowledge of data origins, sources, types of data & metadata.
7. Demonstrate applying the principles of and evaluate the data quality: biased, faulty, dirty, redundant, etc.
8. Demonstrate understanding of modeling types (descriptive, predictive, and perspectives) and potential value for resampling for validation.
9. Demonstrate solving real-world open-ended problems using Data Science analyses, processes, and tools.
10. Knowledge of the Tools of Data Science: Excel, R, Python, SAS, Tableau, PowerBI, Jupyter notebooks, and additional appropriate tools to follow over time.

Foundations of Early Childhood Education (ECED 10083)
This course is designed to acquaint the student with the historical roles of families in their child's development. The student will become familiar with the theories supporting early childhood education and learn how to develop an effective program designed uniquely for children birth to eight. The students will also obtain knowledge of state and federal laws pertaining to the care and education of young children.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Examine the major roles and characteristics of early childhood teachers. (NAEYC 6a, 6c, 6e) (CEC 7.1)
2. Outline the philosophical foundations and historical forces that have shaped early childhood education. (NAEYC 1a, 1b, 6d, 6e) (CEC 1.1)
3. Describe the developmental principles and major milestones of children from birth to age eight to the areas of physical, cognitive, social and emotional, and linguistic development. (NAEYC 1a, 1b, 1c) (CEC 1.1, 1.2, 5.2)
4. Evaluate different types of early childhood programs and Arkansas approved curriculum. (NAEYC 1c, 1d, 5a, 5b) (CEC 5.1, 5.2)
5. Identify appropriate standards and guidelines for teaching young children (birth to age eight) within an inclusive classroom. (NAEYC 1a, 1b, 1c, 1d, 6b, 6d) (CEC 3.3, 4.1, 5.2)
6. Connect the practice of observing children to planning developmentally appropriate learning experiences. (NAEYC 1c, 3a, 3b, 3c) (CEC 4.1, 4.3, 5.1, 5.2)
7. Summarize key socio-cultural, political, and economic context forces that have had an impact on early childhood education. (NAEYC 1b, 2a, 2b, 2c, 4a, 5a, 5b, 6d) (CEC 1.1, 5.1, 5.2, 6.3)
8. Acknowledge professionalism and NAEYC Code of Ethical Conduct. (NAEYC 6a, 6b, 6e) (CEC 7.1, 7.2, 7.3, 7.4)

Child Growth and Development (ECED 11003)
This course examines the environmental and hereditary influences on the physical, cognitive, social-emotional, and linguistic development of both typically and atypically developing children from conception through middle childhood (conception through age 8). Candidates will be introduced to methods for observing and evaluating children's development and identifying potential developmental delays. Practical application of theory is provided through a variety of hands-on experiences and observations.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Compare theories related to child development from conception to age 8. (NAEYC 1a, 1c, 1d) (CEC 1.1)
2. Differentiate between the physical, cognitive, social/emotional and language characteristics of infants, toddlers, preschool, and school age children. (NAEYC 1a, 1b, 1c, 1d, 4a) (CEC 1.2, 1.3)
3. Document observations of infants, toddlers, preschool, and school age children and connect to the Child Development Early Learning Standards (CDELS). (NAEYC 1a, 1b, 3a, 3b, 3c) (CEC 4.1, 4.2, 4.3, 4.4, 5.2)
4. Examine biological and environmental factors influencing child development from conception to age 8. (NAEYC 1a, 1b, 1c, 2a) (CEC 1.1, 1.2, 1.3)
5. Analyze how culture, family and society influence growth and development from conception to age 8. (NAYEC 1a, 1b, 1c, 2a, 2b, 2c, 4a) (CEC 1.1, 1.2, 2.1, 5.1)
6. Acknowledge professional work ethics. (NAEYC 6a, 6b, 6d) (CEC 7.1, 7.2, 7.3, 7.4)

Environment for Young Children (ECED 12043)
This course is designed to provide the student with a broad knowledge base on how to design a program for children developing both typically and atypically. The course provides the opportunity to plan environments that are physically and emotionally secure. Students plan and implement activities that are age and stage appropriate for children birth to five.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify key stages of growth and development in children from birth through pre-kindergarten, including children with unique individual developmental variations.
2. Explain how developmentally appropriate practices support the physical, cognitive, social, and emotional development of all children in a childcare setting.
3. Reflect on and connect prior coursework to real-world teaching practices while working in a licensed childcare setting.
4. Demonstrate professional behavior and ethical practices in alignment with professional standards during interactions with children, families, and colleagues.
5. Apply observation and assessment strategies to document and support the developmental progress of children from birth to preschool.
6. Implement strategies that promote partnerships with families and communities.

Field Experience (ECED 13003)
Students must be employed or volunteer in a licensed childcare facility to apply the acquired knowledge and skills learned in previous coursework. Observation of the student's work and evaluation of student skills are conducted by instructors following the Council for Professional Recognition's CDA national credentialing program. Students must demonstrate competency in all areas observed and complete a minimum number of clock hours, determined by the institution, of observation and work experience with children birth to preschool.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify key stages of growth and development in children from birth through pre-kindergarten, including children with unique individual developmental variations.
2. Explain how developmentally appropriate practices support the physical, cognitive, social, and emotional development of all children in a childcare setting.
3. Reflect on and connect prior coursework to real-world teaching practices while working in a licensed childcare setting.
4. Demonstrate professional behavior and ethical practices in alignment with professional standards during interactions with children, families, and colleagues.
5. Apply observation and assessment strategies to document and support the developmental progress of children from birth to preschool.
6. Implement strategies that promote partnerships with families and communities.

Child Guidance (ECED 20043)
This course relates principles of child development to appropriate methods of guiding children's behavior for children birth through preschool, including children with unique individual developmental variations. Techniques for managing groups of children in the various childcare settings are practiced.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. State typical behaviors for young children according to their ages and development. (NAEYC 1a, 1b, 1c) (CEC 1.1, 1.2. 1.3, 1.4, 2.1)
2. Categorize temperament traits and other rationales for various behaviors of birth through preschool, including children with unique individual developmental variations. (NAEYC 1a, 1b, 1c, 1d, 3c) (CEC 1.1, 1.2)
3. Plan appropriate child-centered classroom environments and curriculum to support children birth through preschool including children with unique individual developmental variations. (NAEYC 1c, 1d, 4a, 4b, 4c) (CEC 1.1, 2.1, 2.2, 2.3, 5.1, 5.2)
4. Provide examples of family involvement opportunities that build relationships between program and families. (NAEYC 1c, 2a, 2b, 2c, 3d) (CEC 2.1, 2.2, 2.3, 7.3)
5. Analyze purposes and types of objective observations used in the early childhood setting, birth through preschool, including children with unique individual developmental variations. (NAEYC 3a, 3b, 3c) (CEC 4.1, 4.2, 4.3, 4.4)
6. Evaluate different behaviors of children birth through preschool, including children with unique individual developmental variations. (NAEYC 3a, 3b, 3c) (CEC 4.1, 4.2, 6.3, 6.4)
7. Interact positively with children birth through preschool including those with unique individual developmental variations. (NAEYC 1b, 1d, 4a, 4b, 4c) (CEC 2.2, 2.3, 6.3, 7.3)
8. Apply guidance principles to support the social emotional growth and development for children birth through preschool, including children with unique individual developmental variations. (NAEYC 1d, 3a, 3b, 3c, 3d, 4a, 4b, 4c) (CEC 1.1, 1.2, 1.3, 2.1, 4.1, 5.2, 6.6)
9. Identify components of a nurturing social environment while recognizing the rationale for positive behavior guidance statements. (NAEYC 1a, 1c, 4a, 5b, 6e) (CEC 1.1, 2.3, 4.1, 6.6)
10. Discuss the basic theories of child guidance (NAEYC 4a, 4b, 5a, 5c) (CEC 2.2, 2.3, 6.1, 6.4)
11. Acknowledge professional work ethics. (NAEYC 6a, 6b, 6d) (CEC 7.1, 7.2, 7.3, 7.4)

Preschool Curriculum (ECED 21043)
This course is based on the foundation of research in child development and focuses on planning and implementing enriching environments with appropriate interactions and activities for young children (ages 3 through 5) including those with special needs to maximize physical, cognitive, communication, creative, language/literacy, and social/emotional growth and development. Competencies are based on Standards developed by the National Association for the Education of Young Children for quality early childhood settings. Also covered: 1--Information on the Quality Approval process and Accreditation for early childhood settings in Arkansas, now called Better Beginnings; 2--Arkansas Frameworks Handbook for Three and Four Year old.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe developmentally appropriate practices as they apply to preschoolers including children with unique individual developmental variations. (NAEYC 1a, 1b, 1c, 4b, 5a) (CEC 1.1, 4.1, 4.2)
2. Plan a developmentally appropriate physical environment for preschoolers including accommodations for children with unique individual developmental variations (NAEYC 1a, 1b, 1c, 4a, 4b, 4c, 5b) (CEC 5.1, 5.2, 6.4,6.5)
3. Plan and implement developmentally appropriate curriculum with measurable objectives, based on the CDELS. (NAEYC 1a, 1b, 4b, 5a, 5b, 5c) (CEC 4.1, 5.2, 6.4)
4. Prepare a developmentally appropriate schedule including routines and transitions for preschoolers including children with unique individual developmental variations. (NAEYC 1a, 1b, 1d) (CEC 1.2, 1.3, 5.1)
5. Compile and create developmentally appropriate lesson plans and materials based on a project or thematic unit for preschoolers including accommodations with unique individual developmental variations. (NAEYC 1a, 1b, 1c, 3a, 4a, 4b, 4c, 5a, 5b) (CEC 5.1, 5.2, 6.3, 6.5, 6.6)
6. Demonstrate developmentally appropriate experiences for preschoolers covering all domains of development including children with unique individual developmental variations. (NAEYC 1a, 1b, 1c, 4a, 4b, 4c, 5a, 5b, 5c) (CEC 5.1, 5.2, 6.5, 6.6)
7. Create a variety of tools/strategies designed to create and maintain positive relationships with families. (NAEYC 2b, 2c, 3d, 4a, 4b) (CEC 1.1, 2.1, 2.2, 2.3, 6.3)
8. Compare and analyze different curriculum approaches and models for preschoolers including children with unique individual developmental variations. (NAEYC 4a, 4b, 4c, 5a, 5b, 5c) (CEC 4.1, 5.2)
9. Identify and utilize observation and assessment tools used in childcare settings. (NAEYC 3a, 3b, 3c, 3d) (CEC 4.1, 4.2, 4.3, 4.4)
10. Acknowledge professional work ethics. (NAEYC 6a, 6b, 6d) (CEC 7.1, 7.2, 7.3, 7.4)

Infant/Toddler Curriculum (ECED 22043)
This course is based on the foundation of research in child development and focuses on planning and implementing enriching environments with appropriate interactions and activities for young children (birth through age 2) including those with unique individual developmental variations, to maximize physical, cognitive, social and emotional, and linguistic development. Competencies are based on Standards developed by the National Association for the Education of Young Children for quality early childhood settings. Also covered:

- Information on the Quality Approval process and Accreditation for Early Childhood settings in Arkansas, now called Better Beginnings.
- Arkansas Standards: Infant Toddler Standards: Arkansas Child Development Early Learning Standards (CDELS).

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe developmentally appropriate practices as they apply to infants/toddlers including children with unique individual developmental variations. (NAEYC 1a, 1b, 1c, 4b, 4c) (CEC 1.1, 4.1, 4.2)
2. Plan a developmentally appropriate physical environment for infants or toddlers including accommodations for children with unique individual developmental variations. (NAEYC 1a, 1b, 1c, 1d, 4a, 4b, 4c, 5b, 5c) (CEC 5.1, 5.2, 6.4, 6.5)
3. Plan and implement developmentally appropriate curriculum with measurable objectives, based on the CDELS. (NAEYC 1a, 1b, 1c, 1d, 3a, 3b, 3c, 4b, 4c, 5a, 5b, 5c) (CEC 4.1, 5.2, 6.4)
4. Prepare a developmentally appropriate schedule including routines and transitions for infants or toddlers including children with unique individual developmental variations. (NAEYC 1a, 1b, 1c, 1.d) (CEC 1.2, 1.3, 5.1)
5. Compile and create developmentally appropriate individual infant or toddler lesson plans and materials; and group lesson plans and materials for infants or toddlers covering all domains of development including accommodations for children with unique individual developmental variations. (NAEYC 1a, 1b, 1c, 1d, 4a, 4b, 4c, 5a, 5b, 5c) (CEC 5.1, 5.2, 6.3, 6.5, 6.6)
6. Demonstrate developmentally appropriate experiences for infants or toddlers covering all domains of development including children with unique individual developmental variations. (NAEYC 1a, 1b, 1c, 1d, 4a, 4b, 4c, 5a, 5b, 5c) (CEC 5.1, 5.2, 6.5, 6.6)
7. Create a variety of tools/strategies designed to create and maintain positive relationships with families. (NAEYC 2a, 2b, 2c, 3d, 4b, 4c, 6b) (CEC 1.1, 2.1, 2.2, 2.3, 6.3)

8. Compare and analyze different curriculum approaches and models for infants and toddlers including children with unique individual developmental variations. (NAEYC 1a, 1b, 1c, 1d, 4b, 5a, 5b, 5c) (CEC 4.1, 5.2)
9. Identify positive guidance strategies for use with infants or toddlers. (NAEYC 1a, 1b, 1c, 1d, 4a, 4b, 4c) (CEC 1.3, 1.4, 2.1, 2.2, 3.3)
10. Identify and utilize observation and assessment tools used in child care settings. (NAEYC 3a, 3b, 3c, 3d) (CEC 4.1, 4.2, 4.3, 4.4)
11. Acknowledge professional work ethics. (NAEYC 6a, 6b, 6d) (CEC 7.1, 7.2, 7.3, 7.4)

Practicum (ECED 23043)
Students must be employed or volunteer in a licensed childcare facility to apply the acquired knowledge and skills learned in previous coursework. Observation of the student's work and evaluation of student skills are conducted by instructors following the NAEYC Professional Preparation Standards and the Professional Standards and Competencies for Early Childhood Educators. Students must demonstrate competency in all areas observed and complete a minimum number of clock hours, determined by the institution, of observation and work experience with children birth to preschool. An emphasis will be on the observation of physical, cognitive, language, social, and emotional development in connection with previous courses.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply knowledge of how children, including children with unique individual developmental variations, grow and learn in a childcare setting. (NAEYC 1a, 1b, 1c, 1d, 4b, 4c) (CEC 1.1, 5.2, 6.3)
2. Demonstrate knowledge of developmentally appropriate practices for children birth through preschool, including children with unique individual developmental variations. (NAEYC 1a, 1b, 1c, 1d, 4b, 4c) (CEC 1.1, 3.1, 5.1)
3. Reflect using prior knowledge to link new ideas to familiar ones while working with children birth through preschool, including children with unique individual developmental variations. (NAEYC 4a, 4b, 4c, 5c, 6d) (CEC 1.1, 1.2, 5.1, 5.2, 7.2)
4. Demonstrate proficiency in working with different populations of students, families and community groups. (NAEYC 2a, 2b, 2c, 4a) (CEC 2.1, 2.2, 2.3, 6.3, 7.3)
5. Demonstrate knowledge of and utilize a variety of observational and authentic assessment options and their appropriate use with children birth through preschool, including children with unique individual developmental variations. (NAEYC 3a, 3b, 3c, 3d) (CEC 4.1, 4.2, 4.3, 4.4)
6. Integrate reflective and critical perspectives on early education practices. (NAEYC 6b, 6d, 6e) (CEC 7.2, 7.3)
7. Engage in informed advocacy for children and the profession. (NAEYC 6a, 6b, 6d) (CEC 7.1, 7.2, 7.3)
8. Use a variety of observation tools with children birth through preschool, including children with unique, individual learning variations. (NAEYC 1a, 1b, 1c, 1d, 3a, 3b, 3c) (CEC 1.2, 1.3, 4.1, 6.2)
9. Demonstrate professional work ethics. (NAEYC 6a, 6b, 6d) (CEC 7.1, 7.2, 7.3, 7.4)

Literature/Language Arts for Early Childhood (ECED 29243)
This course is designed to help early childhood educators understand how children acquire language and how to provide language-rich environments for children from birth through preschool, including those with unique developmental variations. Emphasis is placed on incorporating the four areas of language: speaking, listening, writing, and reading.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Use of literacy strategies through the development of a variety of activities for children birth through preschool, including children with unique individual developmental variations. (NAEYC 1d, 4a, 4b, 4c, 5a, 5b, 5c) (CEC 1.1, 1.2, 3.1, 5.1, 5.2)
2. Connect with families about literacy content for children birth through preschool, including children with unique individual developmental variations. (NAEYC 2a, 2b, 2c, 4c, 5a, 6c)
3. (CEC 2.1, 2.2, 2.3, 6.3, 6.4)
4. Apply knowledge of how young children learn and process information to utilize appropriate teaching strategies for children birth through preschool, including children with unique individual developmental variations. (NAEYC 1a, 1b, 1c, 1d, 4b, 4c, 5a, 5b, 5c, 6c) (CEC 1.1, 1.2, 3.3, 5.1, 5.2)
5. Observe and document children's language and literacy through the use of a variety of assessment tools for children birth through preschool, including children with unique individual developmental variations. (NAEYC 3a, 3b, 3c, 3d, 5b) (CEC 4.1, 4.2, 4.3, 4.4, 6.3)
6. Connect research, knowledge, and practice to the development of a variety of literacy activities for young children, including activities to enhance speaking, listening, writing, and reading for young children. (NAEYC 1a, 2a, 2c, 4b, 4c, 5a, 5b, 5c) (CEC 2.1, 2.2, 5.1, 5.2, 6.2, 6.3, 6.5)
7. Demonstrate professional work ethics. (NAEYC 6a, 6b, 6d) (CEC 7.1, 7.2, 7.3, 7.4)

Math/Science for Early Childhood (ECED 29443)
Students will become familiar with a variety of ways to introduce children from birth through preschool, including those with unique developmental variations, to ideas and concepts related to math and science. They will create activities and plan and practice developmentally appropriate experiences that meet recognized standards, including those of the National Association for the Education of Young Children (NAEYC) and the Council for Exceptional Children (CEC).

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Demonstrate use of inquiry method for children birth through preschool, including children with unique individual developmental variations. (NAEYC 4b, 4c, 5a, 5b, 5c) (CEC 3.1, 5.2)
2. Demonstrate the ability to connect with families about math and science concepts for children birth through preschool, including children with unique individual developmental variations. (NAEYC 2a, 2b, 2c, 4c, 5a, 6c) (CEC 2.1, 2.2, 2.3, 6.3, 6.4)
3. Apply knowledge of how young children learn and process information to utilize appropriate teaching strategies for children birth through preschool, including children with unique individual developmental variations. (NAEYC 1a, 1b, 1c, 4b, 4c, 5a, 5b, 5c) (CEC 1.1, 1.2, 3.3, 5.1, 5.2)
4. Develop quality math and science learning environments for children birth through preschool, including children with unique individual developmental variations. (NAEYC 1a, 1b, 1c, 4a, 4b, 4c, 5a, 5b, 5c) (CEC 3.2, 5.2, 6.3)
5. Observe and document children's math and science reasoning through the use of a variety of assessment tools for children birth through preschool, including children with unique individual developmental variations. (NAEYC 3a, 3b, 3c, 5a, 5b) (CEC 4.1, 4.2, 4.3, 4.4, 6.3)
6. Connect research, knowledge, and practice to the development of a variety of math and science activities for children birth through preschool, including children with unique individual developmental variations. (NAEYC 4b, 4c, 5a. 5b. 5c, 6c) (CEC 2.1, 2.2, 5.1, 5.2, 6.2, 6.3, 6.5)
7. Differentiate the process skills needed for math and science experiences for children birth through preschool, including children with unique individual developmental variations. (NAEYC 5a, 5b) (CEC 3.1, 3.3. 5.2)
8. Develop quality math and science learning activities and environments for young children. (NAEYC 1a, 1b, 1c, 4a, 4b, 4c, 5a, 5b, 5c) (CEC 1.1, 1.2, 3.2, 5.2, 6.3)
9. Demonstrate professional work ethics. (NAEYC 6a, 6b, 6d) (CEC 7.1, 7.2, 7.3, 7.4)

Health, Safety, and Nutrition (ECED 29643)
This course provides an overview of health, safety, and nutrition standards for children from birth through eight years of age. Students will examine child care licensing requirements and explore strategies for planning developmentally appropriate activities. Emphasis is placed on creating safe, high-quality learning environments and implementing effective practices.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify state licensing requirements and health and safety regulations applicable to early childhood care environments.
2. Explain the relationship between nutrition, physical health, and early childhood development for children, birth through age eight.
3. Describe safe and developmentally appropriate learning environments that support children's physical and emotional well-being.
4. Demonstrate planning of daily routines and activities that promote safety, nutrition, and health for young children across different settings.
5. Determine developmentally appropriate practices that support collaboration with families in promoting children's health and safety.
6. Evaluate children's behaviors using observation tools to monitor and support safe, healthy, and developmentally appropriate practices in early childhood settings.

Supporting Early Learners (ECED 29743)
This course relates principles of child development to appropriate methods of guiding children's behavior for children birth through pre-kindergarten, including children with unique individual developmental variations. Techniques for managing groups of children in the various childcare settings are practiced.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify typical developmental behaviors of children from birth through pre-kindergarten, including those with unique individual developmental variations.
2. Describe temperament traits and other developmental factors that influence children's behavior.
3. Demonstrate appropriate guidance strategies for managing groups of children in various early childhood settings.
4. Analyze classroom environments to determine how physical space, materials, and routines impact child development and behavior.
5. Recommend child-centered adaptations that support the development of all children, including those with unique individual developmental variations.
6. Evaluate children's behaviors using objective observation methods and appropriate assessment tools.
7. Design opportunities for meaningful family engagement that strengthen relationships between early childhood programs and families.

Professionalism and Ethics in Early Childhood (ECED 29943)
This course introduces students to current research in the field of early childhood education. Students will build a knowledge base of the NAEYC Code of Conduct by analyzing case studies that demonstrate competencies aligned with current research and practice. They will also develop a professional pathway to demonstrate skills related to the NAEYC Professional Preparation Standards and the Professional Standards and Competencies for Early Childhood Educators.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Demonstrate knowledge of the NAEYC Professional Preparation Standards and the Professional Standards and Competencies for Early Childhood Educators. (NAYEC 6a, 6b, 6c, 6d, 6e) (CEC 7.1, 7.2, 7.3, 7.4)
2. Apply the NAEYC Code of Ethical Conduct to professional characteristics. (NAEYC 6a, 6b, 6c, 6d, 6e) (CEC 7.1, 7.4)
3. Reflect on current developmentally appropriate strategies and experiences with children birth through preschool, including children with unique individual developmental variations. (NAEYC 4a, 4b, 4c, 5a, 5b, 5c) (CEC 7.1, 7.2, 7.3, 7.4)
4. Describe the various NAEYC ethical perspectives involved in early childhood. (NAEYC 1c, 2a, 3d, 4b, 4c) (CEC 7.3, 7.4)
5. Provide evidence of engagement in professional organizations related to the early childhood field. (NAEYC 6a, 6b, 6c, 6d, 6e) (CEC 7.1)
6. Engage in informed advocacy for children and the profession. (NAEYC 6a, 6b, 6c, 6d, 6e) (CEC 7.1)
7. Demonstrate professional work ethics. (NAEYC 6a, 6b, 6d) (CEC 7.1, 7.2, 7.3, 7.4)

Macroeconomics (ECON 21003)
Theory and application of economics to behavior of economy as a whole.
ACTS Equivalency Course ID: ECON 2103 Principles of Macroeconomics.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: ACT Math score of 16 or higher OR Students scoring less than a 16 must have completed Technical Mathematics (MATH 02043) with a grade of C or higher.	Fall Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Evaluate how fiscal and monetary policies influence economic growth and stability, using national income accounting and macroeconomic indicators (e.g., GDP, inflation, unemployment) to interpret economic performance.
2. Analyze aggregate supply and demand models to evaluate short-run and long-run macroeconomic equilibrium under various economic conditions.
3. Examine the phases of the business cycle and identify how government policy tools are used to stabilize the economy during different stages.
4. Apply macroeconomic theories to examine the effects of international trade and finance on domestic output, price levels, and employment.

Microeconomics (ECON 22003)
Theory and application of economic principles related to production, distribution and exchange of goods and services.
ACTS Equivalency Course ID: ECON 2203 Principles of Microeconomics.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: ACT Math score of 16 or higher OR Students scoring less than a 16 must have completed Technical Mathematics (MATH 02043) with a grade of C or higher.	Fall Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Illustrate the basic principles of supply and demand and their effects on market equilibrium using real-world examples.
2. Explain the concept of elasticity and evaluate how consumer and supplier responsiveness to price changes varies across different goods and market conditions
3. Evaluate production costs differentiating between short-run and long-run cost structures in various market environments.
4. Identify key characteristics of different market structures and illustrate how each influences pricing, output, and efficiency in both domestic and international markets through real-world examples.

Introduction to Education (EDHP 20093)
This class will present an overview of the fundamentals of American education. It is designed to provide a basic understanding of school organization, the role of the educator, curriculum foundation, and issues in American education, as well as the responsibilities of teaching as a profession. In addition, the course will provide students with the opportunity to observe the educational process at the elementary, middle, and high school levels. Students will also begin a professional portfolio.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Analyze the historical and philosophical foundations of education and their influence on contemporary educational systems, policies, and practices in the United States and globally.
2. Evaluate current educational structures, including governance, finance, law, and policy, and their impact on educational equity, access, and effectiveness.
3. Develop strategies for creating inclusive learning environments that address student needs, incorporate educational technology, and respond to current research and trends.
4. Articulate a beginning teaching philosophy that demonstrates understanding of curriculum design, instructional approaches, and the challenges of teaching in a changing world.

Engaging All Learners (EDHP 20193)
This course is designed to introduce the historical, sociological, and philosophical foundations of all learners in education. The course will focus on how personal, social, political, cultural, and educational factors affect the success or failure of students in classrooms. The course will include study on how engaging all learners integrates personal and organizational perspectives, research, and theories in developing classroom teachers.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes
By the end of this course, students will be able to:

1. Critique intergroup relations through multiple theoretical lenses, with particular attention to how power dynamics shape differing patterns in both society and educational settings.
2. Integrate the contributions and perspectives of historically marginalized groups into curriculum and pedagogy across subject areas.
3. Examine how educational institutions can either perpetuate or disrupt social issues through their structures, policies, and practices.
4. Create approaches to engaging all learners that are philosophically grounded, discipline-specific, and oriented toward meaningful institutional change.

Liberal Arts in Elementary (EDHP 20293)
This course is designed to prepare teacher candidates to integrate the arts, health, and physical education into the core disciplines at the elementary school (K-6) level. The course focuses on pedagogical knowledge and skills necessary for meeting disciplinary content standards as well as Arkansas teacher standards and competencies.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Demonstrate comprehensive knowledge of arts, health, and physical education content appropriate for elementary education, including fundamental concepts and skills in dance, music, theater, visual arts, health education, and physical education.
2. Apply understanding of learner development, learning differences, and learning environments to design inclusive and developmentally appropriate arts, health, and physical education experiences for elementary students.
3. Develop and implement effective instruction in the liberal arts that makes content accessible to elementary students through appropriate assessment strategies, instructional planning, and varied teaching approaches.
4. Integrate the liberal arts across the elementary curriculum to promote critical thinking, creativity, communication, and holistic development of elementary students.

Children's Literature in Elementary (EDHP 20493)

This course focuses on the evaluation and selection of developmentally appropriate texts from the various genres in children's literature. Students will learn to use effective instructional practices and resources for teaching children and adolescents to read and respond critically to literary texts.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Evaluate and curate developmentally appropriate children's literature collections that represent different voices, genres, and complexity levels for elementary classroom use.
2. Design vocabulary instruction that builds connections between spoken and written language to enhance reading comprehension.
3. Apply instructional methods to guide elementary students through various levels of textual analysis, including close reading techniques and evidence-based interpretation of literary elements.
4. Create integrated literacy lessons that incorporate multiple text formats, digital tools, and writing activities aligned with developmental stages and standards.

Introduction to K-12 Educational Technology (EDHP 21063)
This three-hour course is designed to provide students with an overview of the technologies that can enhance teaching and learning. Students will use the computer as a tool to design educational materials, perform classroom management tasks, enhance instruction, communicate, and research.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Demonstrate proficiency in essential digital communication and productivity tools for educational settings, including email management, document creation, presentation design, website development, database usage, and digital media integration.
2. Evaluate digital resources and technologies for educational purposes, including assessing the credibility of online information, identifying appropriate educational software, and understanding copyright and fair use principles in educational contexts.
3. Develop technology-enhanced instructional materials that effectively support teaching and learning objectives in K-12 classrooms while addressing student needs.
4. Articulate the professional and ethical responsibilities of educators regarding technology integration, digital citizenship, and creating equitable access to digital learning opportunities.

Basic Emergency Medical Technology (EMSC 11007)
An introduction to the study of emergency medical services and the basic principles, procedures and techniques of emergency care. Successful completion of this course prepares students to apply for the National Registry EMT-B Examination.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Summer	Lecture: 5 Lab: 2	7

Course Learning Outcomes By the end of this course, students will be able to:

1. Show communication skills that will enhance patient care.
2. Practice skills to work independently as an EMT.
3. Apply critical thinking skills to apply prehospital situations to work alongside a Paramedic.
4. Prepare students to take the National Registry EMT Exam for licensure.
5. Investigate legal documentation that involves all patient care and permanent records.
6. Practice the act of professionalism at times.

Paramedic I (EMSC 20114)

A fifteen-week course designed to introduce the Paramedic Student to Advanced Prehospital Care. Paramedic I is designed to prepare the emergency medical student to perform advanced life support skills; specifically, the recognition of Dysrhythmias and Advance Cardiac Life Support Certification. The class will prepare the student for the skills needed to properly start and administer intravenous medications; endotracheal intubations will be taught in this section with the use of emergency meds administered via the endotracheal airway. Along with skills completion, the paramedic student will be introduced to communication and proper documentation of patient assessment. During this course, the student will begin the field portion of the Paramedic program. A minimum of 200 hours riding time will be required before advancing to Paramedic II. Students will document all field and clinical time through an electronic tracking program.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: A grade of C or higher in: Medical Terminology (ALHE 10503) AND Essentials of A&P with Lab (BIOL 10253/BIOL 10151) AND Basic Emergency Medical Technology (EMSC 11007)	Fall	Lecture: 8 Lab: 1.5 Clinical: 4.5	14

Course Learning Outcomes By the end of this course, students will be able to:

1. Show communication skills that will enhance patient care.
2. Practice skills to work independently as the lead paramedic.
3. Apply critical thinking skills to all prehospital situations.
4. Determine differential diagnosis when evaluating the medical/trauma patient.
5. Practice the act of professionalism at times.

Paramedic III (EMSC 22008)
An eight-week course designed to prepare the Paramedic student to understand special considerations in the field of EMS, provide the student an overview of EMS operations, and to prepare and review the student for the National Registry for Emergency Medical Technicians-Paramedic certification examination. Time will be allocated to complete Any unfinished clinical time/proficiencies (the last 100 hours-Capstone/Internship is required). Students will document all field and clinical time through an electronic tracking program.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Paramedic II (EMSC 22116) with a grade of C or higher	Summer	Lecture: 8 Lab: 1 Clinical: 7	8

Course Learning Outcomes By the end of this course, students will be able to:

1. Show communication skills that will enhance patient care.
2. Practice skills to work independently as the lead paramedic.
3. Apply critical thinking skills to all prehospital situations.
4. Determine differential diagnosis when evaluating the medical/trauma patient.
5. Practice the act of professionalism at times.

Paramedic II (EMSC 22116)
A fifteen-week course designed to prepare the Paramedic Student with the skills needed to treat the critically ill and injured patient. The semester will focus on the recognition of medical, trauma, pediatric, geriatric, and OB/GYN emergencies. The student will be prepared for the practical portion as well as the written portion of the National Registry for Emergency Medical Technicians-Paramedic certification examination. A minimum of 200 hours clinical/100 hours Capstone/Internship hours (total 300 hours) will be required before advancing to Paramedic III. Students will document all field and clinical time through an electronic tracking program.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Paramedic I (EMSC 20114) with a grade of C or higher	Spring	Lecture: 3 Lab: 1 Clinical: 4	16

Course Learning Outcomes By the end of this course, students will be able to:

1. Show communication skills that will enhance patient care.
2. Practice skills to work independently as the lead paramedic.
3. Apply critical thinking skills to all prehospital situations.
4. Determine differential diagnosis when evaluating the medical/trauma patient.
5. Practice the act of professionalism at times.

Writing Studio (ENGL 00191)
This course provides an option for students who score a 16-18 on the English and 16-18 on the Reading portion of the ACT or equivalent scores on an approved placement examination to enroll concurrently in this course and ENGL 10103, English Composition I. Class will provide students the concepts and mechanics needed for success in English Composition.
Students must complete both this course with a C or higher and ENGL 10103 with a passing grade to receive their credit and earned grade for both courses. Students who are required to take this course must also be enrolled in ENGL 10103 at the same time; it cannot be taken alone.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: ENGL 00203 with a grade of C or higher OR ACT English and Reading score of 16-18 OR Equivalent placement test score. Corequisite: English Composition I (ENGL 10103)	Fall Spring Summer	Lecture: 1 Lab: 0	1

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply Standard American English grammar rules, including subject-verb agreement, pronoun usage, and verb tense consistency.
2. Correct common sentence errors, such as fragments, run-ons, and comma splices, to improve sentence clarity.
3. Demonstrate proper punctuation and mechanics, including correct comma usage, apostrophes, and capitalization, to enhance readability.
4. Revise sentences for improved word choice and clarity by eliminating vague pronoun references, wordiness, and improper diction.

Integrated Reading and Writing (ENGL 00203)

This course includes strategies for advancing reading comprehension and facilitating critical analysis of text. Further, this course will include instruction on active reading strategies using text structure to improve comprehension, interpreting, and evaluating reading materials. This course will integrate critical analysis of text into writing instruction focused on the composition of essays, including pre-writing, drafting, organization, focus, unity, and revising and editing.

Students who test into Integrated Reading and Writing must enroll in the course during their first or second semester in college and each subsequent semester, if necessary, until the course is completed with a least a grade of C.

A student making a C in this course is eligible to take ENGL 20203 or ENGL 10103 with ENGL 00191. A student that successfully completes this course with a B or higher, may take ENGL 10103 without the corequisite support course.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
ACT English AND Reading Score of 0-15	Fall Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply pre-reading, annotating, summarizing, and questioning strategies to analyze and engage with academic texts.
2. Apply standard English conventions, including sentence structure, subject-verb agreement, punctuation, and word choice to enhance clarity and correctness in writing.
3. Develop well-structured paragraphs that include clear topic sentences, supporting details, and logical transitions.
4. Integrate ideas from readings into writing by summarizing, paraphrasing, and citing sources appropriately.
5. Apply revision and proofreading strategies to strengthen content development, organization, and grammatical correctness in writing.

English Composition I (ENGL 10103)
Principles and techniques of expository and persuasive composition, analysis of texts with introduction to research methods, and critical thinking.
ACTS Equivalency Course ID: ENGL 1013 Composition I.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: ENGL 00203 with a grade of C or higher OR ACT English AND Reading score of 16-18 OR Required placement test score.	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Respond appropriately to various rhetorical situations, purposes, and audiences.
2. Use writing and reading for inquiry, learning, thinking, and communicating.
3. Integrate original ideas with those of others.
4. Develop flexible strategies for generating, revising, editing, and proofreading.
5. Use collaborative writing processes.
6. Demonstrate knowledge of structure, paragraphing, tone, syntax, grammar, and documentation.

English Composition II (ENGL 10203)
Further study of principles and techniques of expository and persuasive composition, analysis of texts, research methods, and critical thinking.
ACTS Equivalency Course ID: ENGL 1023.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: English Composition I (ENGL 10103)	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Respond appropriately to various rhetorical situations, purposes, and audiences.
2. Use writing and reading for inquiry, learning, thinking, and communicating.
3. Integrate original ideas with those of others, resulting in a research-based writing project.
4. Develop flexible strategies for generating, revising, editing, and proofreading.
5. Practice collaborative writing processes.
6. Demonstrate knowledge of structure, paragraphing, tone, mechanics, syntax, grammar, and documentation.

Creative Writing (ENGL 20103)
Students develop creative perception, thinking, and imagination in writing fiction and poetry. Students will have their work read and critiqued in a workshop format as well as in conference with the instructor.
ACTS Equivalency Course ID: ENGL 2013 Introduction to Creative Writing.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: English Composition I (ENGL 10103)	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Generate creating writing projects in both prose and verse.
2. Learn techniques, styles, and forms for imaginative writing.
3. Participate constructively in a workshop environment.
4. Explore structures and techniques used in published fiction and poetry.

Technical Writing for the Workplace (ENGL 20203)
This course covers the principles of researching, organizing, and writing technical documents.
ACTS Equivalency Course ID: ENGL 2023 Introduction to Technical Writing.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: ENGL 00203 with a grade of C or higher OR ACT English AND Reading score of 16 or higher OR Required placement test score.	Fall Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Generate technical documents in a variety of formats, including letters, memos, proposals, and reports.
2. Use collaborative writing processes.
3. Learn to integrate visuals.
4. Use technology in the creating of technical documents.

World Literature I (ENGL 21103)
Students analyze and interpret works from several historical periods ranging from early civilizations through the Renaissance. Completion of ENG 1103 English Composition I strongly recommended.
ACTS Equivalency Course ID: ENGL 2113 World Literature I.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Understand significant literary and cultural developments in world civilizations by identifying key authors, their contributions, and the historical and cultural contexts that shaped their works.
2. Understand the interaction of various literary and cultural traditions.
3. Analyze major texts of world literature, emphasizing literary techniques, forms, and ideas.
4. Compose a significant analytical writing assignment.

World Literature II (ENGL 21203)
Students analyze and interpret literary works from several historical periods ranging from the Renaissance to the present. Completion of ENG 1103 English Composition I strongly recommended.
ACTS Equivalency Course ID: ENGL 2123 World Literature II.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Understand significant literary and cultural developments in world civilizations by identifying key authors, their contributions, and the historical and cultural contexts that shaped their works.
2. Understand the interaction of various literary and cultural traditions.
3. Analyze major texts of world literature, emphasizing literary techniques, forms, and ideas.
4. Compose a significant analytical writing assignment.

Introduction to Fiction (ENGL 23194)
Students survey short fiction and novels with emphasis on analytical reading and writing skills.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Comprehend a work of fiction on the literal level.
2. Draw, support, and develop inferences from a piece of fiction.
3. Demonstrate an understanding of the historical development of the short story as a genre distinct from the novel.
4. Orally and in writing, analyze a piece of fiction by identifying and discussing the following literary devices: plot, character, setting, point of view, theme, symbol, allegory, style, and tone.
5. Orally and in writing, demonstrate an understanding of how literary devices offer further dimensions to the literal level of the text.
6. Orally and in writing, present and defend a unified, coherent, and well-supported interpretation of a piece of fiction by engaging in literary criticism.
7. Use evidence from both primary and secondary sources to support an interpretation of a piece of fiction.
8. Write about a piece of fiction using current, commonly accepted conventions of literary criticism.
9. Articulately communicate an artistic appreciation of a piece of fiction to others.

American Literature I (ENGL 26503)
Students will analyze and interpret literary works from the 1400s to 1865. Students will study American authors and the philosophies represented in their works. Completion of ENG 1103 English Composition I is strongly recommended.
ACTS Equivalency Course ID: ENGL 2653 American Literature I.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Read, analyze, and interpret works by representative American writers.
2. Identify various literacy techniques, methods, and ideas.
3. Illustrate how literature reflects culture and society.
4. Write at least one interpretive paper.

American Literature II (ENGL 26603)
A continuation of American Literature I. Students will analyze and interpret works from 1865 to present literature. American Literature I is not a prerequisite for American Literature II. Completion of ENG 1103 English Composition I is strongly recommended.
ACTS Equivalency Course ID: ENGL 2513 American Literature II.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Read, analyze, and interpret works by representative American writers.
2. Identify various literacy techniques, methods, and ideas.
3. Illustrate how literature reflects culture and society.
4. Write at least one interpretive paper.

Introduction to Culture Geography (GEOG 21103)
A study of interaction among cultures and physical environments to develop students' understanding of local and global social issues such as economics, language, population, politics, and religion. Strong reading skills required.
ACTS Equivalency Course ID: GEOG 2113 Cultural Geography.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Develop knowledge of man’s habitat.
2. Use this knowledge for an improved understanding of the problems facing man and society.
3. Gain a basic understanding of the five themes on geography, the tools of geography, and how to apply them.
4. Become familiar with the principal areas of geographic study including physical, cultural, political, economic, ecological, and urban geography and cartography.
5. Understand how the regional distribution and use of world resources affect political conditions.
6. Improve place-name competence and the use of the grid system.

Physical Geology Lab (GEOL 11101)
Students will identify basic minerals, fossils and rocks, their origins, and economic values. Geologic map reading will be practiced. Field trips will enhance the lab experience.
*ACTS Equivalency Course ID: GEOL 1114 Physical Geology (must also take GEOL 11103 Physical Geology to fulfill ACTS equivalency requirement)

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite: Physical Geology (GEOL 11103)	Spring	Lecture: 0 Lab: 2	1

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the composition, formation, and distinguishing characteristics of igneous, sedimentary, and metamorphic rocks using basic mineral chemistry, accepted mineral and rock identification methods, and plate tectonic based formation processes.
2. Explain geological processes such as volcanoes, earthquakes, mountain building, and the formation of geologic structures using principles of the rock cycle, plate tectonics, seismology, and earth science.
3. Analyze the roles of surface water, wind, and groundwater in shaping Earth's surface and how these forces contribute to soil formation and erosion.
4. Evaluate evidence related to geologic time, dating techniques, and resource identification using the scientific method.

Physical Geology (GEOL 11103)
The study of the earth and the modification of its surface by internal and external processes. Includes examination of the Earth's interior, magnetism, minerals, rocks, landforms, structure, plate tectonics, geological processes, and resources. Arkansas geology will be featured.
*ACTS Equivalency Course ID: GEOL 1114 Physical Geology (must also take GEOL 11101 Physical Geology Lab to fulfill ACTS equivalency requirement)

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite: Physical Geology Lab (GEOL 11101)	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the rock cycle, plate tectonics, and the geologic time scale with dating methods.
2. Describe the mineral groups, identification methods of minerals, formation, and basic chemistry of minerals.
3. Explain how igneous rocks form and their characteristics.

Introduction to Engineering (GNEG 11003)
Course is intended for potential engineering students in the first year of study. It introduces students to the process and diversity of the various engineering fields. It also acquaints students with modeling and problem-solving techniques used by engineers as well as some of the computer tools necessary for pursuing a degree in engineering. This course is designed for current and future transfer students.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite: College Algebra (MATH 11003)	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify the role of engineers in society including expectations for professional and ethical behavior in engineering.
2. Recognize the major fields of engineering summarizing the types of work and responsibilities associated with each discipline.
3. Develop and present engineering projects or design solutions.
4. Apply basic problem-solving steps to engineering tasks using appropriate units, conversions, tables, and graphs.

Health Data Content (HIMT 20063)
This course covers the standards for patient and health care data; data collection issues and documentation requirements; data access and retention.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	The course is not currently offered.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Introduce health information management concepts common to allied health professionals.
2. Describe characteristics of health care delivery and settings in the United States.
3. Delineate career opportunities for health information management professionals.

Concepts of Physical Activity (HEAL 10003)
Students gain knowledge and appreciation of the importance of physical activity for lifelong health, wellness, and quality of life. Opportunities provided for psychomotor development. ACTS Equivalency Course ID: HEAL 1003 Personal Health.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	The course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify positive and negative factors that impact physical, social, mental, and emotional health and well-being.
2. Demonstrate basic understanding of critical health issues and behavior affecting personal health.
3. Discuss strategies for establishing and maintaining healthful living practices, including exercise.
4. Identify the cause of stress and the steps to successfully manage stress.
5. Recognize and discuss the processes and effects of addictive behavior, substance abuse, and substance dependence.
6. Demonstrate knowledge of essential nutrients, their food sources, and why they are important to the body.

Legal Concepts in Health Care (HIMT 20163)
Provides an overview of the principles of law as applied to health care. The course gives consideration to the importance of medical records as legal documents, to the legal aspects of health care organizations, to the release of information, and to consents and authorizations.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	This course is not currently offered.	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Recognize the principles of laws and regulations as applied to the healthcare industry.
2. Recognize the purpose of several laws specific to health care.
3. Demonstrate knowledge of the importance of medical records as legal documents.

Diagnosis Coding and Billing (HIMT 20263)
Develops a working knowledge of general code matching and diagnosis assignments used in hospitals, clinics, and insurance offices for health-care industry. Emphasis is placed on purpose of coding, definitions of key terms, accurate application of coding principles and an overview of the impact of prospective reimbursement on the function of coding; principles of classification. Familiarization with standard coding references is provided (CPT, ICD-10).

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	This course is not currently offered.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the background, history, and characteristics of health care delivery in the United States which led to the development and current use of the ICD 10CM coding system.
2. Identify the uses of the coding manual.
3. Identify placement of Seton stamp codes on insurance form and distinguish between professional and city services
4. interpret the information in the section guidelines and notes.
5. Apply modifier code.
6. Apply the information contained in the appendices, figures, glossary, and index to code appropriately.
7. Use the symbols, abbreviations, and acronyms contained in the textbooks in coding exercises.
8. Demonstrate the ability to code properly from all aspects of the ICD-10-CM manual and HCPCS.
9. Interpret diagnostic statements and general anatomy and physiology terminology in order to code appropriately.
10. Describe the revenue cycle and importance of accurate coding to the reimbursement of a health care facility.
11. Gain knowledge in preparation to become certified in coding.
12. Provide diagnosis codes for services along with outpatient procedure codes that ar placed on the patient's health care bill.
13. Identify CMS documentation guidelines.
14. Describe methods by which the risk of fraud can be minimized in coding/billing practices.
15. Discuss the impact of the Affordable Care Act on the cost, quality, and access to health care in the U.S. and consequent effects on coding/billing practices.

Outpatient Coding and Billing (HIMT 20363)
This course is designed to develop a basic knowledge of how to apply the coding rules to bill for patient services. In addition, a variety of payment systems will be presented--DRG, APC, RUGS.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Diagnosis Coding and Billing (HIMT 20263)	This course is not currently offered.	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the background, history, and characteristics of health care delivery in the US which led to the development and current use of the CPT coding system.
2. Identify the uses of the CPT coding manual.
3. Identify placement of the CPT codes on insurance forms and displaying professional and facility services.
4. Interpret the information contained in the section guidelines and notes.
5. Apply appropriate CPT modifiers to codes.
6. Apply the information contained in the appendices, figures, glossary, and index to code appropriately.
7. Use the symbols, abbreviations, and acronyms contained in the textbooks in coding exercises.
8. Demonstrate the ability to code properly from all aspects of the CPT manual and HCPCS.
9. Interpret diagnostic statements and general anatomy and physiology terminology in order to code appropriately.
10. Describe the revenue cycle and importance of accurate coding to the reimbursement of a health care facility.
11. Gain knowledge in preparation to become certified in coding.
12. Provide diagnosis codes for services along with outpatient procedure codes that are placed on the patient's health care bill.
13. Identify CMS documentation guidelines.
14. Describe methods by which the risk of fraud can be minimized in coding/billing practices.
15. Discuss the impact of the Affordable Care Act on the cost, quality, and access to health care in the U.S. and consequent effects on coding/billing practices.

World Civilization I (HIST 11103)
This course explores the development of human societies from prehistory to the 17th Century, examining the cultural, political, economic, and social structures of major civilizations around the world.
ACTS Equivalency Course ID: HIST 1113 World Civilizations I.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes
By the end of this course, students will be able to:

1. Analyze and interpret major cultural, political, and economic developments from ancient civilizations to the early modern era, explaining their relevance to contemporary society.
2. Assess how trade, migration, and conflict between cultures shaped civilizations and contributed to global interconnectivity.
3. Critically evaluate primary sources such as historical texts, artifacts, and art to construct evidence-based interpretations of past societies.
4. Identify and explain key themes in world history including empire-building, religious development, and social change and analyze their significance across historical periods.
5. Compare and contrast the political, economic, and social systems of major civilizations to evaluate patterns of diversity and commonality in human history.

World Civilization II (HIST 11203)
This course examines the development of global civilizations from the 17th Century to the present, focusing on the political, social, economic, and cultural transformations that have shaped the modern world.
ACTS Equivalency Course ID: HIST 1123 World Civilization II.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes
By the end of this course, students will be able to:

1. Analyze major political, economic, and social developments from the early modern period to the present and explain how they have shaped contemporary global dynamics.
2. Evaluate the influence of key ideologies such as nationalism, socialism, and liberalism on historical movements and their continued impact on international relations.
3. Analyze the causes, developments, and long-term effects of major global conflicts including the World Wars and Cold War on international relations and human societies.
4. Interpret cultural transformations resulting from modernization, globalization, and technological change, and assess their influence on identity and societal values across world civilizations.

United States History I (HIST 21103)
This course explores the history of the United States from its Indigenous and colonial roots through the end of the Civil War.
ACTS Equivalency Course ID: HIST 2113 United States History I.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 3 Lab: 3	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Trace the social, political, and economic foundations of early American society, including Indigenous cultures, European colonization, and colonial government development.
2. Analyze the causes and key events of the American Revolution, and assess how principles of liberty, democracy, and republicanism shaped the founding of the United States.
3. Analyze the drafting and ratification of the U.S. Constitution, and evaluate debates surrounding federalism, checks and balances, and the Bill of Rights and their impact on American governance.
4. Evaluate the impact of 19th-century reform movements, including abolition, women's rights, and labor, on American society and politics.
5. Assess the economic, social, and cultural differences between the Northern and Southern states, and evaluate how these divisions contributed to rising national tensions before the Civil War.

United States History II (HIST 21203)
This course examines the history of the United States from Reconstruction (1865) to the present, exploring the political, social, economic, and cultural transformations that have shaped modern America.
ACTS Equivalency Course ID: HIST 2123 United States History II.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Analyze the causes and effects of industrialization and urbanization in the United States, including their influence on society, the economy, and labor movements.
2. Assess the emergence of the United States as a global power by examining key events, such as the Spanish-American War, World Wars I and II, and their effects on foreign and domestic policy.
3. Evaluate the evolution of civil rights movements from the late 19th to 20th centuries, analyzing the strategies, challenges, and successes of groups advocating for racial, gender, and economic equality.
4. Assess the political, social, and economic impact of the Cold War on American society, including the influence of McCarthyism, the civil rights movement, and the Vietnam War on domestic and foreign policy.
5. Analyze key social, political, and economic issues facing the United States from the late 20th century to the present, explaining how historical developments inform current debates on immigration, healthcare, and environmental policy.

Arkansas History (HIST 25503)
This course provides an in-depth exploration of the history of Arkansas from its Indigenous origins to the present day. Students will examine the state's political, social, economic, and cultural development within the broader context of American history.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Examine the history and cultures of Indigenous peoples in Arkansas and analyze the effects of European colonization on their societies.
2. Analyze the political, social, and economic development of Arkansas from early settlement through the Civil War, explaining how key historical events shaped the state's identity.
3. Assess the historical evolution of Arkansas's economy by examining key industries such as agriculture, timber, and mining and their influence on the state's development and demographics.
4. Analyze major civil rights movements in Arkansas by evaluating key events, figures, and legislation that contributed to the state's ongoing struggle for racial equality and justice.
5. Evaluate contemporary social, political, and economic issues in Arkansas by connecting them to historical developments, with emphasis on education, healthcare, and environmental policy.

HVAC Fundamentals (HVAC 10503)
An instructional and hands-on experience with a wide range of residential HVAC equipment. Course content includes thermodynamic and heat transfer concepts, basic energy and power definitions, and scientific terminology related to HVAC. Students are introduced to the equipment used in residential HVAC systems through the classroom and in the laboratory. The laboratory for this course includes residential equipment as well as professional-grade tools used by practicing HVAC technicians. The course emphasizes safety considerations for the HVAC workplace.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 2 Lab: 1	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Identify HVAC system components.
2. Explain HVAC system operation.
3. Perform basic HVAC related calculations.
4. Measure system operation using appropriate metering tools.

HVAC Controls (HVAC 11503)

This course provides advanced training for students interested in employment as an HVAC Technician working on residential HVAC systems. Building on the HVAC Fundamentals course, students will focus on electrical components used to control residential HVAC processes and equipment. Students will study HVAC fundamentals, HVAC electrical systems and components, air conditioning system controls, heating system controls, and heat pump system controls. Academic portions of the course are completed using MyHVACLab web-based academic training. Students gain hands-on experience with a variety of HVAC trainers, residential HVAC equipment, and tools used by HVAC technicians in the field. Shop procedures are explained, constantly emphasized, and strictly enforced.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: HVAC Fundamentals (HVAC 10503) AND AC Electricity (TECH 10453)	Spring	Lecture: 2 Lab: 1	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify HVAC control components.
2. Describe control system operation.
3. Interpret HVAC control schematics.
4. Navigate control system interfaces.
5. Troubleshoot common HVAC control systems.

HVAC Troubleshooting (HVAC 12503)

This course provides advanced training for students interested in employment as an HVAC Technician working on residential HVAC systems. Building on the HVAC Controls course, students will focus on malfunctions, troubleshooting, and repair of mechanical, electrical, and control components found in residential HVAC systems. Students will complete additional studies in HVAC electrical systems and components, air conditioning system controls, heating system controls, heat pump system controls, and installation, maintenance, servicing, and troubleshooting HVAC components. Academic portions of the course are completed using MyHVACLab web-based academic training. Students gain hands-on experience with a variety of HVAC trainers, residential HVAC equipment, and tools used by HVAC technicians in the field. Shop procedures are explained, constantly emphasized, and strictly enforced.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: HVAC Controls (HVAC 11503)	Spring	Lecture: 2 Lab: 1	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply systematic troubleshooting methods.
2. Diagnose electrical and mechanical issues.
3. Interpret diagnostic readings.
4. Develop and implement repair solutions.

Math Skills (MATH 00131)

This course provides an option for students who score a 16-18 on the mathematics portion of the ACT or an equivalent score on an approved placement examination to enroll simultaneously in this course and MATH 11003 College Algebra. The class will provide students with concepts and mechanics needed for College Algebra.

Students must complete both courses with a C or higher and MATH 11003 with a passing grade to receive the credit and earned grade for both courses. Students who are required to take this course must also be enrolled in MATH 11003 at the same time; it cannot be taken alone.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite: College Algebra (MATH 11003)	Fall Spring Summer	Lecture: 1 Lab: 0	1

Course Learning Outcomes By the end of this course, students will be able to:

1. Solve and graph linear equations and inequities.
2. Solve systems of linear equations.MA
3. Factor polynomials in one variable.
4. Examine functions to find domain and range, evaluate, and graph.
5. Solve basic quadratic, rational, and radical equations.
6. Simplify exponential, rational, and radical expressions.

Math for Life (MATH 00201)

This course provides an option for students who score a 16-18 on the mathematics portion of the ACT or an equivalent score on an approved placement examination to enroll concurrently in this course and MATH 11103 Quantitative Literacy. The class will provide students with the concepts and mechanics needed for Quantitative Literacy.
Students must complete this course with a C or higher and MATH 11103 with a passing grade to receive the credit and earned grade for both courses. Students who are required to take this course must also be enrolled in MATH 11103 at the same time; it cannot be taken alone.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite:	Fall	Lecture: 1	1
Quantitative Literacy (MATH 11103)	Spring	Lab: 0	

Course Learning Outcomes By the end of this course, students will be able to:

1. Tabulate basic financial formulas.
2. Interpret common statistical measures.
3. Differentiate different types of mathematical models.
4. Convert standard units of measurement.

Essentials of Math (MATH 02043)

This course provides an option for students who score a 12-15 on Mathematics portion of the ACT or an equivalent score on an approved placement examination to begin their math remediation. This course will teach topics, concepts, and mechanics in mathematics to enable a student to be successful in subsequent courses.

A student making a C in this course is eligible to take Technical Math (MATH 10103), (MATH 12103), College Algebra (MATH 11003) with Math Skills (MATH 00131), or Quantitative Literacy (MATH 11103) with Math for Life (MATH 00201).

A student that successfully completes this course with a B or higher, may take College Algebra (MATH 11003) without corequisite support course or Quantitative Literacy (MATH 11103) without corequisite support course.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Analyze the properties of number sets, interpret their graphs, and solve basic one-variable equations.
2. Apply the principles of the Rectangular Coordinate System to graph and evaluate linear equations using multiple methods.
3. Utilize the Laws of Exponents and polynomial operations to simplify and manipulate algebraic expressions.
4. Solve quadratic equations by applying appropriate factoring techniques.
5. Evaluate rational and radical expressions and solve equations involving them.

Technical Mathematics (MATH 10103)
This course is designed for students to gain appreciation for mathematics and its interface with everyday activities. Use of these skills should apply to industry-specific scenarios and real-life situations. Intended for students who will not continue in higher-level mathematics courses. This course serves as the terminal math course for most AAS degree plans.
ACTS Equivalency Course ID: MATH 1013 Applied Technical Math.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Essentials of Math (MATH 02043) with a grade of C or higher OR ACT Math score of 16 or higher OR Equivalent placement test score.	Fall Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply the principles of arithmetic with signed numbers, fractions, and decimals, and perform fundamental algebraic operations.
2. Analyze and solve elementary algebraic equations, manipulate formulas, and translate real-world problems into algebraic expressions.
3. Demonstrate knowledge of geometry, including calculating the area and volume of polygons and understanding geometric principles.
4. Apply the concepts of right-angle trigonometry and interpret basic statistical data.
5. Perform essential business calculations, including simple interest, mortgage payments, and dosage measurements.

College Algebra (MATH 11003)
This course presents quadratic, absolute value, polynomial, rational, exponential, and logarithmic functions and their graphs. It also includes a study of inequalities, system of equations, and matrices (graphing calculator required).
ACTS Equivalency Course ID: MATH 1103 College Algebra.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: ACT Math 19 or higher **or** have an equivalent test score OR ACT Math 16-18 or equivalent test score with simultaneous enrollment in MATH 00131. (Complete MTH 11003 with a passing grade and MATH 00131 with a grade of C or higher to receive the credit and earned grade for both courses. Students who are required to take this course cannot be enrolled in this course without also being enrolled in MATH 00131) OR ACT Math score 13-18 **with** High School Cum GPA of 3.25 AND a grade of "B" or higher in Algebra II OR Complete MATH 02043 with a grade of B or higher can go directly into MATH 11003 OR Complete MATH 02043 with a grade of C requires simultaneous enrollment in both MATH 11003 and MATH 00131.	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply the operations and properties of functions including composition and use them to analyze their graphs.
2. Apply the First Fundamental Theorem of Algebra to find the real and complex zeros of higher order polynomials.
3. Analyze and apply the properties of exponential and logarithmic functions to solve equations and real-world application problems.

4. Solve systems of linear equations by various methods including using matrices.

Quantitative Literacy (MATH 11103)
This course provides students with mathematical understanding and skills to be productive workers, discerning consumers, and informed citizens. The areas of finance, statistics and probability, mathematical modeling, and quantities and measurement will be covered. This course is designed to be the terminal math course for Non-STEM (Science, Technology, Engineering, and Math) majors. Students who plan to study any higher mathematics courses or pursue certain advanced degrees need to take College Algebra instead of this course.
ACTS Equivalency Course ID: MATH 1113 Quantitative Literacy.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: ACT Math 19 or higher or have an equivalent test score OR ACT Math 16-18 or equivalent test score with simultaneous enrollment in MATH 00201. (Complete MATH 11103 with a passing grade and MATH 00201 with a grade of C or higher to receive the credit and earned grade for both courses. Students who are required to take this course cannot be enrolled in this course without also being enrolled in MATH 00201) OR ACT Math score 13-18 with High School Cum GPA of 3.25 AND a grade of "B" or higher in Algebra II OR Complete MATH 02043 with a grade of B or higher can go directly into MATH 11103 OR Complete MATH 02043 with a grade of C requires simultaneous enrollment in both MATH 11103 and MATH 00201.	Fall Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:
1. Calculate real-world scenarios using standard financial formulas.
2. Analyze and apply graphical representations and statistical measures.

3. Evaluate the accuracy and limitations of mathematical models.
4. Convert between different units of measurement in practical contexts.

Trigonometry (MATH 12003)
This course covers right triangle trigonometry applications, including the laws of sines and cosines, radian measure and applications, trigonometric functions of real numbers, graphs of trigonometric functions, trigonometric identities and equations, polar coordinates, complex numbers in polar (trigonometric) form. A calculator with trigonometric functions is required.
ACTS Equivalency Course ID: MATH 1203 Plane Trigonometry.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: College Algebra (MATH 11003) with a grade of C or higher.	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Analyze and apply trigonometric functions, their properties, and graphical representations to solve mathematical and real-world problems.
2. Evaluate and manipulate trigonometric identities, inverse functions, and equations while utilizing appropriate technology for computation and graphing.
3. Solve problems involving right and oblique triangles, including applications of the law of sines and cosines and area calculations, using appropriate technology needed.
4. Convert complex numbers in standard form to trigonometric form.

Math for Healthcare Professions (MATH 12103)
This course provides instruction in dosage calculations using the basic formula and the ratio to proportion method as well as other means of calculation related to medications. Topics include but are not limited to interpretation of drug labels, syringe types, conversions, roman numerals, reconstitution and apothecaries, mixing medications IV flow rates, military time, interpretation of physician orders and transcribing to Medication Administration Records, dispensing, and proper documentation of medications as well as the Six Rights of Medication Administration.
Students must complete the course with a C or higher to complete the nursing requirement.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Essentials of Math (MATH 02043) with a grade of C or higher OR ACT Math score of 16 or higher OR Equivalent placement test score.	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Convert fractions, mixed numbers, ratios and proportions to a form that can be used to calculate drug dosages.
2. Calculate simple to complex medication dosages using dimensional analysis.
3. Calculate medication dosages using kilograms for pediatric medication orders instead of pounds.
4. Summarize the six rights of medication administration and apply them to medication dosage calculations where appropriate.

Statistics (MATH 21003)
Covers descriptive and inferential statistical techniques and methods in life, physical, and social science. Topics include qualitative data analysis, frequency distributions, numerical methods, data dispersions, variance analysis, estimation theory, sampling distributions, discrete and continuous probability distributions, hypothesis testing, and confidence interval estimation. Cross-listed as BUS 21003.
ACTS Equivalency Course ID: MATH 2103 Introduction to Statistics.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: A grade of C or higher in: College Algebra (MATH 11003) OR Quantitative Literacy (MATH 11103)	Fall Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Represent and interpret data using statistical software, including creating tables, graphs, and calculating descriptive statistics.
2. Apply probability concepts and counting methods to solve problems involving compound and conditional events.
3. Explain the properties of sampling distribution and apply the Central Limit Theorem to make statistical inferences.
4. Conduct hypothesis tests and construct confidence intervals for population parameters using statistical software, interpret results in context.
5. Analyze relationships between variables using correlation and linear regression models; assess model fit and prediction suitability.

Math I (MATH 21043)
Focuses on sets, logic, and numbers with emphasis on the axiomatic development of the real numbers.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: College Algebra (MATH 11003) OR Quantitative Literacy (MATH 11103)	Fall Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe and apply set theory concepts, including set operations, properties, relations, and functions.
2. Explain and perform operations within the real number system, including whole numbers, integers, fractions, decimals, percents, and rational numbers.
3. Apply the four major operations used in the real number system to solve a variety of mathematical problems.
4. Teach a mathematical concept while applying multiple strategies to reach students of differing learning styles.

Math II (MATH 21143)
Focuses on mathematical systems, elementary algebra, probability and statistics, and geometry with applications.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: College Algebra (MATH 11003) OR Quantitative Literacy (MATH 11103)	Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply principles of elementary algebra to solve equations and interpret mathematical expressions.
2. Analyze basic geometric figures to solve problems involving perimeter, surface area, and volume.
3. Interpret and apply basic concepts of probability and statistics, including data organization and measure of central tendency.
4. Teach a mathematical concept while applying multiple strategies to reach students of differing learning styles.

Survey of Calculus/Business Calculus (MATH 22003)
Includes selected topics in elementary calculus and analytic geometry for students in business, agriculture, and social sciences.
ACTS Equivalency Course ID: MATH 2203 Survey of Calculus.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: College Algebra (MATH 11003) with a grade of C or higher.	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Interpret limit and continuity and evaluate limits; find and apply slopes, rates of change, and derivatives using the definitions; find derivatives using differentiation formulas, including the product and quotient rules; find higher order derivatives.
2. Find derivatives using the chain rule and generalized power rule; recognize non-differentiable functions; graph, using the first and second derivates.
3. Understand and apply optimization; optimize lot and harvest size; perform implicit differentiation and apply it to related rates problems.

Discrete Mathematics (MATH 23103)
This course emphasis applications of mathematics in computer science and other areas of modern technology.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: College Algebra (MATH 11003) with a grade of C or higher OR ACT Math score of 26 or higher OR Equivalent placement test score.	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply mathematical reasoning and formal proof techniques, including direct, contrapositive, and contradiction methods, to establish the validity of mathematical statements.
2. Analyze logical propositions using truth tables and determine the logical equivalence or validity of compound statements.
3. Construct formal proofs of mathematical theorems using mathematical induction and other proof strategies.
4. Demonstrate understanding of set theory by performing set operations and applying set algebra to solve problems.
5. Evaluate the properties of relations and functions, including reflexivity, symmetry, transitivity, domain, range, and bijectivity.
6. Model problems (computer science, mathematical, etc.) using discrete structures such as graphs, trees, and combinatorial principles, and solve them using appropriate mathematical tools.

Calculus I (MATH 24004)
Covers the first 4 hours of 12 hours (a three-course sequence) in calculus designed to teach the fundamentals of differential and integral calculus needed in applications, including multivariate calculus. Topics include limits of functions, the derivative, applications of the derivative, the fundamental theorem of calculus, the definite integral, applications of the definite integral, the trigonometric, exponential, and logarithmic functions.
ACTS Equivalency Course ID: MATH 2405 Calculus I.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisites: A grade of C or higher in: College Algebra (MATH 11003) AND Trigonometry (MATH 12003).	Fall	Lecture: 4 Lab: 0	4

Course Learning Outcomes By the end of this course, students will be able to:
1. Analyze and evaluate limits, continuity, and derivatives.
2. Apply differentiation techniques to solve problems and analyze graphs.
3. Apply the differentiate logarithmic and exponential functions.

The following topics will be included in this course:
- Functions, including sketching, slopes, minimum, maximum, relative extrema, inflection points, asymptotes, and other analysis
- Limits
- Continuity
- Differentiation
- Implicit differentiation
- Exponential, trigonometric, and logarithmic functions
- Exponential growth and decay
- Slope and rates of change
- Maximum and minimum values and optimum solutions to problems
- Antiderivatives
- Definite and indefinite integration, including the Fundamental Theorem of Calculus
- Area between curves
- Integration techniques
- Integration by parts (Calculus I or Calculus II)
- Trigonometric and substitutions (Calculus I or Calculus II)
- Integration of rational functions using partial functions (Calculus I or Calculus II)

Calculus II (MATH 25004)
The second 4 hours of 12 (a three-course sequence) in calculus designed to teach the fundamentals of differential and integral calculus needed in applications, including multivariable functions. Topics include exponential and logarithmic functions, natural growth and decay, trigonometric and hyperbolic functions, polar coordinates, conic sections, and infinite series.
ACTS Equivalency Course ID: MATH 2505 Calculus II.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Calculus I (MATH 24004) with a grade of C or higher.	Spring	Lecture: 4 Lab: 0	4

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply advanced integration techniques to solve mathematical and real-world problems.
2. Analyze and evaluate infinite sequences and series.

The following topics will be included in this course:

- Integration by parts
- Trigonometric and substitutions
- Integration of rational functions using partial functions
- Applications of integration
- Applications of improper integrals
- Sequence and infinite series including:
    - Convergence test
    - Taylor Series
    - Radius of convergence
- Vectors (Calculus II or Calculus III)
- Calculus of vector-valued functions (Calculus I or Calculus III)

Calculus III (MATH 26004)
The third 4 hours of 12 (a three-course sequence) in calculus. The topic is multivariable calculus.
ACTS Equivalency Course ID: MATH 2603 Calculus III.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Calculus II (MATH 25004) with a grade of C or higher.	Summer	Lecture: 4 Lab: 0	4

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply vector and multivariable calculus concepts to mathematical and real-world problems.
2. Evaluate functions of several variables using differentiation and integration.
3. Apply advanced integral techniques in vector fields

The following topics will be included in this course:

- Two-dimensional and three-dimensional vector-valued functions
- Functions of several variables
- Partial derivatives
- Multiple integration
- Line and surface integrals
- The student will understand and apply the following (Calculus II or Calculus III):
    - Vectors
    - Calculus of Vector-valued functions

Public Relations (MGMT 10053)

This course provides a comprehensive overview of public relations (PR) fundamentals, exploring how PR professionals build and maintain positive relationships between organizations and their publics. Students will learn about core PR principles, tools, and practices and will develop practical skills through hands-on activities, case studies, and projects. By the end of the course, students will be equipped with essential skills for creating press releases, managing media relations, and handling basic PR crises, preparing them for entry-level positions or further study.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the primary function of public relations and differentiate public relations from related fields like advertising and marketing.
2. Use tools such as press releases, media kits, and press conferences to create public relations content.
3. Compose effective press releases and craft compelling narratives for a brand or organization.
4. Demonstrate the fundamentals of building media relationships, responding to crises, and managing public perceptions.
5. Discuss digital tools, such as email marketing software and social media platforms, to strengthen public relations campaigns.
6. Demonstrate the importance of ethics in public relations and communicate responsibility with diverse audiences.

Customer Relations Management (MGMT 10153)
This course provides a comprehensive understanding of Customer Relations Management (CRM) principles, focusing on leveraging customer data analytics and CRM software to drive marketing decisions and improve business performance. Students will explore the use of CRM technologies, including AI and automation, to optimize customer engagement and enhance long-term relationships. The course emphasizes evaluating CRM initiatives using key performance indicators and customer insights to refine strategies and maximize customer lifetime value.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Develop a comprehensive understanding of Customer Relations Management (CRM) principles.
2. Develop an understanding of how to leverage customer data analytics and CRM software to make informed marketing decisions, personalize customer experiences, and improve business performance.
3. Apply skills in designing and implementing customer engagement strategies that enhance satisfaction, foster long-term relationships, and drive customer lifetime value.
4. Evaluate the effectiveness of CRM technologies, including AI, automation, and digital tools, in optimizing customer interactions across multiple touchpoints and channels.
5. Develop the ability to assess CRM initiatives' effectiveness by analyzing key performance indicators and using customer insights to refine marketing and relationship management strategies.

Social Media Management (MGMT 10253)
This course introduces the fundamentals of social media management for business, nonprofit, and personal branding. Students will explore core tools, strategies, and ethical practices for creating content, engaging audiences, and measuring performance across major platforms. Through hands-on projects and case studies, students will gain practical skills to support or lead social media efforts in professional settings.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the fundamentals of managing social media for business, nonprofit, and personal branding purposes.
2. Create effective content strategies and content calendars tailored to specific platforms and goals.
3. Identify and analyze target audiences to guide content creating and engagement strategies.
4. Assess social media performance using key metrics and apply insights to improve future campaigns.
5. Identify and discuss ethical considerations and emerging trends in the field of social media management.

Principles of Leadership (MGMT 20053)
This course explores the principles of effective leadership, distinguishing between leadership and management while examining key leadership behaviors and characteristics. Students will evaluate various leadership styles, their impact on motivation, team development, and organizational effectiveness, while learning strategies for coaching, developing, and motivating individuals. The course emphasizes goal-setting, decision-making, and problem-solving strategies, equipping students with the skills to transition into a leadership role with confidence in any organizational setting.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Explain effective leadership and distinguish between leadership and management, identifying key leadership behaviors and characteristics of successful leaders.
2. Evaluate different leadership styles and assess their impact on motivation, team development, and organizational effectiveness.
3. Analyze how effective leaders develop, coach, and motivate individuals, while utilizing strategies to recognize and interact with different personality types in the workplace.
4. Develop the ability to set organizational goals and objectives, aligning them with the organization's mission, and identifying strategies for achieving them.
5. Apply effective leadership strategies to identify problems, make decisions, and transition from employee to supervisor, addressing challenges in leadership decision-making and problem-solving.

Conflict Management (MGMT 20153)
This course focuses on developing strategies for managing workplace conflicts, with an emphasis on analyzing different conflict management styles and evaluating their effectiveness. Students will learn to apply ethical decision-making and develop frameworks that align with human resources responsibilities while exploring techniques for fair task delegation and conflict resolution. The course also emphasizes integrating decision-making strategies to resolve disputes and foster a positive organizational environment.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Analyze different styles of managing conflict and assess their effectiveness in resolving workplace disputes.
2. Demonstrate ethical decision-making by choosing appropriate actions in situations requiring the application of business ethics.
3. Evaluate delegation and work assignment techniques to ensure fair and effective task distribution while minimizing potential conflicts.
4. Integrate decision-making strategies into conflict resolution processes.
5. Design conflict resolution frameworks that align with human resources responsibilities.

Principles of Management (MGMT 20163)
Students study and develop techniques and skills in the principal areas of management; planning and decision-making; organizing and human resources; leadership, including motivation and communications; and control.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe key management techniques, skills, and responsibilities used in modern organizations.
2. Identify and explain current issues, challenges, and trends in management practice.
3. Apply fundamental management principles to evaluate real-world business cases and organizational scenarios.
4. Analyze management problems by assessing case studies and proposing evidence-based solutions.

Project Management (MGMT 20253)
This course covers the key activities in the project lifecycle, focusing on effective planning, execution, and closure, while evaluating techniques to manage scope, schedule, cost, and quality. Students will develop skills in creating project charters, applying the triple constraint, and utilizing technology to improve project management practices through data analysis and lessons learned.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Analyze the key activities in the project lifecycle to ensure effective project planning, execution, and closure.
2. Evaluate various project control techniques to manage scope, schedule, cost, and quality, and to mitigate risks.
3. Apply the triple constraint (scope, time, and cost) in determining project scope and making project decisions.
4. Develop the ability to create a scalable project charter with key components, ensuring it aligns with the size and objectives of the project.
5. Develop the ability to utilize technology to research, analyze, and interpret business information, and capture lessons learned to improve project management practices.

Human Resource Management (MGMT 20453)
This course provides a comprehensive understanding of core Human Resource Management (HRM) principles, focusing on recruitment, selection, training, compensation, and employee development. Students will learn to align HR practices with organizational goals, foster positive work environments, and resolve workplace issues like conflict and discrimination. The course also emphasizes critical thinking and decision-making in HRM, helping students develop strategies to address employee relations and organizational needs effectively.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Explain core HRM principles and critical issues related to recruitment, selection, training, and compensation.
2. Apply HR practices in decision-making, recruitment, selection, and employee development to align HR functions with organizational goals.
3. Evaluate HR management practices related to diversity, motivation, compensation, and performance to create positive and compliant work environments.
4. Apply HR decision-making processes and develop critical thinking skills to solve problems in employee relations and organizational needs.
5. Analyze workplace issues such as conflict and discrimination, applying conflict resolution strategies to foster a harmonious work environment.

Principles of Marketing (MKTG 25183)
Provides a study of the business activities performed to direct the flow of goods and services from the producer to the consumer.
ACTS Equivalency Course ID: MKTG 2003 Principles of Marketing.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Explain the core concepts, theories, principles, and terminology associated with marketing.
2. Analyze the function of marketing as it relates to an organization's strategy and to other organizational functions.
3. Evaluate the ethical, cultural, social, and global implications of marketing decisions on stakeholders and society.
4. Identify the tools, technologies, and methods utilized to make marketing decisions and implement marketing activities.

CNC Operator I (MSTE 10147)

Prepares students for entry into the CNC machining industry. Students explore career opportunities and requirements of a CNC operator. Content emphasizes beginning skills key to the success of working in the CNC machining industry. Students study workplace safety and organization, job-related mathematics, basic blueprint information, metrology, work holding and tool set-up, CNC control panels and basic machine maintenance and troubleshooting as each apply to CNC lathe operations.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 6 Lab: 1	7

Course Learning Outcomes By the end of this course, students will be able to:

1. Perform setup machinist duties to produce a lathe-machined part.
2. Identify key maintenance points on the CNC lathe.
3. Measure parts using precision instruments.
4. Interpret machining-related blueprints.
5. Perform machining-related math and trigonometry calculations.

CNC Operator II (MSTE 10237)
Designed to build on the skills and knowledge students learned in CNC Operator I for the entry into the machining industry. Content emphasizes beginning skills key to the success of working in the CNC machining industry. Students study workplace safety and organization, geometric dimension and tolerance, work holding and tool set-up, CNC control panels, and basic machine maintenance and troubleshooting as each apply to the CNC milling operations.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 6 Lab: 1	7

Course Learning Outcomes By the end of this course, students will be able to:

1. Perform setup machinist duties to produce a mill-machined part.
2. Identify key maintenance points on the CNC mill.
3. Measure parts using precision instruments.
4. Interpret machining-related blueprints.
5. Perform machining-related math and trigonometry calculations.

CNC Production Technician I (MSTE 10337)
Designed to build on the skills and knowledge students learned in the Certificate of Proficiency for CNC Operators. Students explore the importance of employability and entrepreneurship skills, solve problems using critical thinking, creativity and innovation; demonstrate inspection methods, select appropriate cutting tools, perform advanced set up and operation of a CNC lathe machine, and demonstrate basic computer-aided design/computer-aided manufacturing processes as it relates to CNC lathe operations.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: CNC Operator II (MSTE 10237)	Spring	Lecture: 6 Lab: 1	7

Course Learning Outcomes By the end of this course, students will be able to:

1. Write, edit, and upload CNC lathe programs.
2. Design a machine set up and fixturing for part production.
3. Produce parts to print specifications, maintaining dimensional accuracy within ±0.001” tolerance using both CNC and manual lathes.
4. Demonstrate proficiency in manual lathe setup, tool selection, and part production
5. Apply trigonometry and geometric calculations for machining processes.

CNC Production Technician II (MSTE 10437)
Designed to build on the skills and knowledge students learned in CNC Production Technician I. Students demonstrate leadership and teamwork skills; solve problems using critical thinking, creativity and innovation; demonstrate inspection methods, select appropriate cutting tools, perform advanced set up and operation of a CNC milling machine, and demonstrate basic computer-aided design/computer-aided manufacturing processes as it relates to CNC milling operations.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: CNC Production Technician I (MSTE 10337)	Spring	Lecture: 6 Lab: 1	7

Course Learning Outcomes By the end of this course, students will be able to:

1. Write, edit, and upload CNC mill programs.
2. Design a machine set up and fixturing for part production.
3. Produce parts to print specifications, maintaining dimensional accuracy within ±0.001” tolerance using both CNC and manual mills.
4. Demonstrate proficiency in manual mill setup, tool selection, and part production.
5. Apply trigonometry and geometric calculations for machining processes.

Basic Machining (MSTE 12003)

This course introduces the fundamentals of machining as they apply to industrial maintenance and millwright operations. Students will develop hands-on skills using manual machine tools such as the engine lathe, vertical milling machine, drill press, and basic measuring instruments. Emphasis is placed on safe machine operation, print reading, layout work, tool selection, and machining techniques commonly required for equipment repair, part fabrication, and plant maintenance.

Students will learn to measure, cut, drill, bore, turn, and mill common industrial materials to specified tolerances. The course prepares maintenance personnel to fabricate replacement parts, modify components, and perform precision work necessary to keep industrial equipment operating efficiently.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall	Lecture: 0 Lab: 3	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Demonstrate safe operation of manual machine tools. Students will safely operate basic manual machining equipment—including the engine lathe, vertical milling machine, and drill press—by following established shop safety procedures and proper machine operation practices.
2. Interpret mechanical drawings and perform layout work. Students will read and interpret basic mechanical drawings and specifications and accurately perform layout and measurement using precision tools common to industrial maintenance settings.
3. Machine parts to specified dimensions and tolerances. Students will fabricate and modify basic components by performing turning, drilling, boring, and milling operations on common industrial materials to meet specified dimensions and tolerances.
4. Apply machining skills to industrial maintenance scenarios. Students will apply basic machining techniques to real-world maintenance tasks, including repairing worn components, fabricating replacement parts, and modifying existing parts to support equipment operation and reliability.

Music (MUSC 10003)
Introductory survey of music including the study of elements and forms of music, selected musical works, music terminology, important musical genres, periods, and composers, and an introduction to major musical instruments.
ACTS Equivalency Course ID: MUSC 1003 Music Appreciation.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify key musical elements, terminology, forms, and composers across various genres and time periods.
2. Differentiate musical instruments aurally and visually.
3. Analyze the role of music and musicians within their historical and cultural contexts.
4. Critique a musical performance using appropriate musical terminology.

Nursing Theory I (NURS 15008)
This introductory 16-week course provides a strong foundation in nursing practice with a focus on fundamental nursing concepts and medical-surgical care. Students will learn client-centered care, therapeutic communication, and professional standards. Students will also gain the knowledge and skills to provide compassionate and evidence-based nursing care. This course focuses on assessment of the client as well as the nursing process, roles of the ADN nurse, and skills basic to activities of daily living. Coping mechanisms, communication, nutrition, pharmacology, and drug administration are integrated throughout the course.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Successful completion of the prerequisite courses and acceptance into the RN program. Corequisite: Nursing Practicum I (NURS 15105) AND General Psychology (PSYC 11003)	Fall Spring	Lecture: 8 Lab: 0	8

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply knowledge of effective and therapeutic communication techniques to determine the most appropriate, patient-centered interaction (QSEN: Patient-Centered Care)
2. Describe the role of safety and quality on patient care outcomes (QSEN: Safety and Quality)
3. Identify legal and ethical practice standards and principles consistent with professional nursing practice (Professionalism)
4. Identify legal and ethical practice standards and principles consistent with professional nursing practice (Professionalism)
5. Identify basic pharmacology principles as they affect safe nursing practice (QSEN: Safety and Quality)
6. Utilize the nursing process to develop a plan of care to meet the basic needs of adult patients (QSEN: Evidence-Based Practice; Informatics and Technology)

Nursing Practicum I (NURS 15105)

This course introduces the student to basic psychomotor skills and hand-on learning experience centered on fundamental nursing concepts and medical-surgical care. Students will develop proficiency in basic foundational nursing skills, mastering essential techniques for providing care to culturally diverse adult clients in hospitals, outpatient centers, clinics, and skilled care facilities. Topics covered include medication administration, electronic health records, automated medication dispensing equipment, and the principles of client confidentiality under HIPAA regulations. Simulated lab practice and return demonstrations of related skills in addition to clinical experiences are utilized in this course. Simulation may be utilized in addition to clinical experiences in this course.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Successful completion of the prerequisite courses and acceptance into the RN program. Corequisite: Nursing Theory I (NURS 15008) AND General Psychology (PSYC 11003)	Fall Spring	Lecture: 0 Clinical: 5	5

Course Learning Outcomes By the end of this course, students will be able to:

1. Communicate effectively with adult clients and members of the nursing team (QSEN: Client-Centered Care; Teamwork and Collaboration)
2. Adhere to legal and ethical standards and principles consistent with professional nursing practice (Professionalism)
3. Utilize the nursing process to implement an individualized plan of care for adult clients to ensure safe, quality care (QSEN: Evidence-Based Practice; Safety and Quality; Informatics and Technology)
4. Accurately and safely perform basic psychomotor skills (QSEN: Safety and Quality

Nursing Theory II (NURS 22010)
This course provides for the acquisition of knowledge related to evidence-based registered nursing care across the lifespan, encompassing medical-surgical, maternal newborn, pediatric, and community nursing. Students utilize clinical judgment, health teaching, and effective collaboration with healthcare teams. Students will also gain essential knowledge to deliver safe and compassionate care to diverse client populations in various healthcare settings.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: A grade of C or higher in: Nursing Theory I (NURS 15008) AND General Psychology (PSYC 11003) Corequisite: Nursing Practicum II (NURS 22105)	Fall Spring	Lecture: 10 Clinical: 0	10

Course Learning Outcomes By the end of this course, students will be able to:

1. Differentiate the scope of practice for nursing and interprofessional healthcare team members. (QSEN: Teamwork and Collaboration; Professionalism)
2. Apply knowledge of growth and development to develop patient-centered teaching plans to promote health and prevent illness for the childbearing woman and newborn. (QSEN: Patient-Centered Care)
3. Prioritize nursing care for patients across the lifespan who have common, uncomplicated health problems in a variety of health care settings. (QSEN: Safety and Quality; Informatics and Technology)
4. Utilize the nursing process as a basis for clinical judgement supported by evidence to plan care that promotes safe, holistic nursing care. (QSEN: Evidence-Based Practice: Safety and Quality)

Nursing Practicum II (NURS 22105)
This course provides students with the opportunity to apply clinical judgment skills and collaborate with healthcare team members in caring for the clients across the lifespan with uncomplicated health problems. Through practical experiences in medical-surgical, maternal newborn, pediatric, and community nursing settings, students will develop and utilize essential skills in delivering safe and comprehensive client care. Simulation may be utilized in addition to clinical experiences in this course.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: A grade of C or higher in: Nursing Practicum I (NURS 15105) AND General Psychology (PSYC 11003) Corequisite: Nursing Theory II (NURS 22010)	Fall Spring	Lecture: 0 Clinical: 5	5

Course Learning Outcomes By the end of this course, students will be able to:

1. Communicate effectively with nursing and interprofessional team members to obtain quality information as a basis for safe, coordinated care (QSEN: Teamwork and Collaboration; Informatics and Technology; Professionalism)
2. Apply knowledge of growth and development to implement patient-centered teaching plans to promote health and prevent illness for the childbearing woman and newborn. (QSEN: Patient-Centered Care)
3. Utilize clinical judgment to provide patient-centered care supported by evidence for patients across the lifespan with common, uncomplicated health problems (QSEN: Patient-Centered Care; Evidence-Based Practice)
4. Incorporate holistic strategies to promote health and safety when caring for the childbearing woman and newborn (QSEN: Patient-Centered Care; Safety and Quality)
5. Utilize legal and ethical standards of professional nursing practice when prioritizing patient care (QSEN: Evidence-Based Practice; Professionalism)

Nursing Theory III (NURS 23010)
This course focuses on the registered nursing care of diverse clients experiencing moderate and complex interruptions in physiological needs, mental health conditions, and the role of the registered nurse as a provider of care, manager of care, and member of the profession. These roles will be explored as they relate to the profession of nursing, legal and ethical issues, principles of teaching and learning, theory of nursing, professional accountability, current health issues, and leadership and management concepts. Safety, clinical reasoning, and client teaching concepts are stressed to reduce preventable errors and promote positive client outcomes. Core concepts include critical thinking, therapeutic communication, client safety, the nursing process, communication, ethical/legal issues, cultural concepts, community resources, assessment techniques, nutritional needs, delegation, prioritization and collaboration. A focus will be placed on preparation for the NCLEX-RN. Students will enhance critical thinking and test-taking skills, study strategies, and analyze NCLEX-RN type questions, become equipped with the knowledge and abilities to address complex healthcare challenges and ensure optimal client outcomes.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Nursing Theory II (NURS 22010) with a grade of C or higher. Corequisite: Nursing Practicum III (NURS 23105)	Fall Spring	Lecture: 10 Clinical: 0	10

Course Learning Outcomes By the end of this course, students will be able to:

1. Plan safe, coordinated care with the healthcare team to achieve positive patient outcomes (QSEN: Teamwork and Collaboration; Safety and Quality).
2. Identify continuous quality improvement principles and processes (QSEN: Safety and Quality; Informatics and Technology).
3. Utilize clinical judgement to prioritize patient-centered care for patients across the lifespan with complex physical and mental health problems (QSEN: Patient Centered Care; Evidence-Based Practice).
4. Analyze ethical dilemmas related to care of complex patients (Professionalism).

Nursing Practicum III (NURS 23105)
This course is designed to provide opportunities to apply the knowledge acquired in Nursing Theory III to provide safe and quality care to culturally diverse acute unstable adult clients in hospitals and mental health clients in hospitals, clinics, and mental health facilities. The course also provides for the application of knowledge in leadership and role development. Students will engage in a precepted clinical experience as part of this course. Simulation may be utilized in addition to clinical experiences in this course.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Nursing Theory II (NURS 22010) with a grade of C or higher. Corequisite: Nursing Practicum III (NURS 23105)	Fall Spring	Lecture: 0 Clinical: 5	5

Course Learning Outcomes

By the end of this course, students will be able to:

1. Coordinate safe care with the healthcare team to achieve positive patient outcomes (QSEN: Teamwork and Collaboration; Safety and Quality).
2. Apply knowledge of continuous quality improvement principles and processes to improve the quality of patient care in coordination with the healthcare team (QSEN: Safety and Quality; Informatics and Technology).
3. Utilize clinical judgment to prioritize patient-centered care for patients across the lifespan with complex physical and mental health problems (QSEN: Patient-Centered Care; Evidence-Based Practice).
4. Function as a patient advocate to facilitate ethical decision making (Professionalism).

Introduction to Philosophy (PHIL 11003)
Using the guiding principles of critical thinking, students will explore basic questions concerning human values, nature of reality, and nature of knowledge that are found in the study of philosophy.
ACTS Equivalency Course ID: PHIL 1103 Philosophy.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Explain key philosophical concepts related to human values, theories of knowledge, and theories of reality.
2. Evaluate diverse philosophical perspectives to develop an informed point of view.
3. Apply principles of logical reasoning to construct well-supported arguments in response to philosophical questions.

Physical Science Lab (PHSC 10031)
A laboratory experience to support PHS 10043 Physical Science. Laboratory meets three hours per week.
ACTS Equivalency Course ID: PHSC 1004 Physical Science. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Essentials of Math (MATH 02043) with a grade of C or higher. Corequisite: Physical Science (PHSC 10043)	Fall Spring Summer	Lecture: 0 Lab: 3	1

Course Learning Outcomes By the end of this course, students will be able to:

1. Demonstrate and practice laboratory safety.
2. Apply the scientific method to collect data from experiments and draw evidence.
3. Conduct experiments following prescribed instructions to collect data, and then draw conclusions concerning Newton's Laws of Motion, heat transfer, and electricity and apply these conclusions to real-world mechanical systems.
4. Apply significant figure rules to perform and report accurate scientific calculations in laboratory experiments and problem-solving exercises.
5. Analyze experimental data to determine the relationships between force, motion, temperature, and electrical energy, and explain these relationships using scientific principles.
6. Conduct experiments to observe chemical reactions, measure changes in properties, and analyze reaction outcomes based on scientific principles.

Physical Science (PHSC 10043)
This course presents an overview of essential topics from astronomy, physics, electricity, chemistry, geology and meteorology. Features biographies of some of the important contributors to advances in the physical sciences. The course does not satisfy science certification for secondary school teachers; it is not accepted as a major requirement in Any natural science field. Lecture meets three hours per week. Corequisite: PHS 10031 Physical Science Lab.
ACTS Equivalency Course ID: PHSC 1004 Physical Science. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Essentials of Math (MATH 02043) with a grade of C or higher. Corequisite: Physical Science Lab (PHSC 10041)	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply the scientific method of solving problems to collect data and draw evidence-based conclusions.
2. Apply significant figure rules to perform and report accurate scientific calculations.
3. Describe the effects of Newton's Law of Motion, heat and electricity on mechanical systems students commonly encounter, such as vehicles, electrical circuits, and thermal systems.
4. Describe the ways in which atoms chemically bond to form compounds, and the properties of those compounds.
5. Balance chemical equations and determine the type of chemical reactions they represent (decomposition, synthesis/combination, combustion, precipitation, acid-base, etc.) and explain the mole concept.

University Physics I Lab (PHYS 20301)

This laboratory course supports the Corequisite University Physics I lecture class and provides students with the opportunity to learn and practice working safely in a laboratory. Students will conduct experiments that illustrate the concepts covered in the lecture class. It is designed for science and engineering majors.

ACTS Equivalency Course ID: PHYS 2034 Calculus-Based Physics I. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Recommended Prerequisite: Calculus I (MATH 24004) with a grade of C or higher. Corequisite: University Physics I (PHYS 20303) AND Calculus I (MATH 24004)	Fall	Lecture: 0 Lab: 1	1

Course Learning Outcomes By the end of this course, students will be able to:

1. Complete Physics I laboratory investigations.
2. Collect measurements with uncertainty analysis.
3. Interpret data using calculus-based models.
4. Communicate results through clear graphs, tables, and written lab reports.

University Physics I (PHYS 20303)
This calculus-based physics course focuses on applying calculus to physical principles including mechanics (one and two dimensions), fluids, and heat. It is designed for science and engineering majors.
ACTS Equivalency Course ID: PHYS 2034 Calculus-Based Physics I. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Recommended Prerequisite: Calculus I (MATH 24004) with a grade of C or higher. Corequisite: University Physics I Lab (PHYS 20301) AND Calculus I (MATH 24004)	Fall	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe one- and two-dimensional motion both mathematically and graphically, including interpreting motion graphs to explain changes in position, velocity, and acceleration.
2. Solve problems involving constant acceleration, circular motion, and simple harmonic motion using calculus-based equations of motion.
3. Analyze the forces acting on an object using free-body and extended free-body diagrams including applying Newton's motion laws to predict physical behavior.
4. Apply conservation laws of momentum, energy, and angular momentum to analyze interactions in closed and isolated systems.
5. Use knowledge of how gravity works on Earth and in space to solve problems involving orbits and the motion of planets or satellites.
6. Summarize core principles of waves and thermodynamics, including wave parameters, standing waves, temperature, specific heat, entropy, and the laws of thermodynamics, and relate them to real-world physical systems.

University Physics II Lab (PHYS 20401)
This laboratory course supports the Corequisite University Physics II lecture class and provides students with the opportunity to learn and practice working safely in a laboratory. Students will conduct experiments that illustrate the concepts covered in the lecture class. It is designed for science and engineering majors.
ACTS Equivalency Course ID: PHYS 2044 Calculus-Based Physics II. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: University Physics I with Lab (PHYS 20303/PHYS 20301) OR Calculus I (MATH 24004) Recommended Prerequisite: Calculus II (MATH 25004) with a grade of C or higher. Corequisite: University Physics II (PHYS 20403) AND Calculus II (MATH 25004)	Spring	Lecture: 0 Lab: 1	1

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply theoretical principles to perform experiments related to Physics II fundamental concepts.
2. Operate laboratory equipment to collect accurate and relevant data in physics experiments.
3. Interpret data using calculus-based models.
4. Communicate results through clear graphs, tables, and written lab reports.

University Physics II (PHYS 20403)
This calculus-based physics course is a continuation of PHYS 20303 and focuses on applying calculus to physical principles including electricity, magnetism, light, and geometric optics. It is designed for science and engineering majors.
ACTS Equivalency Course ID: PHYS 2044 Calculus-Based Physics II. Must successfully complete both lecture and lab component for equivalency.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: University Physics I with Lab (PHYS 20303/PHYS 20301) AND Calculus I (MATH 24004) Corequisite: University Physics II Lab (PHYS 20401) AND Calculus II (MATH 25004)	Spring	Lecture: 3 Lab: 0	1

Course Learning Outcomes By the end of this course, students will be able to:

1. Explain the principles of electric force and fields, electric potential, and Gauss's Law to summarize how they describe the behavior of charged particles.
2. Apply formulas related to capacitance, energy storage, current, and resistance to solve quantitative problems involving electric circuits.
3. Analyze DC and AC circuits using Ohm's Law, Kirchhoff's Rules, and concepts of inductance to predict voltage, current, and power in various components.
4. Analyze how magnetic forces and fields work in moving systems, and how electromagnetic induction is used in devices like generators and transformers.
5. Interpret Maxwell's Equations including explaining their significance in unifying electric and magnetic fields and describing electromagnetic wave propagation.
6. Demonstrate principles of geometrical optics (reflection, refraction) or wave optics (interference, diffraction) to explain real-world optical phenomena.

United States Government (PLSC 20003)
The introduction to the principles, structure, processes and functions of the United States federal government and other related political activities. Completion of English Composition I strongly recommended.
ACTS Equivalency Course ID: PLSC 2003 American National Government.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the structure and functions of state and local governments and how they operate within the framework of U.S. federalism and the U.S. Constitution.
2. Analyze the role of state constitutions in shaping government structure, lawmaking processes, and the balance of power within state and local institutions.
3. Evaluate the influence of political parties, interest groups, and campaign strategies on elections and policymaking at the state and local levels.
4. Apply knowledge of fiscal policies to assess how budgeting decisions impact public services and policy priorities in state and local governments.

PN Practicum I (PNUR 11055)
The student will provide direct patient care skills to adult patients. Emphasis is placed upon basic care, safety, and comfort of patients with a focus on body mechanics, nursing procedures, pharmacology, medical mathematics, laboratory and diagnostic procedures.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Successful completion of the Prerequisite courses and acceptance into the PN program. Corequisite: PN Theory I (PNUR 11210)	Fall	Lecture: 0 Clinical: 5	5

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the nursing process and identification of basic physical, mental, emotional, sociocultural and spiritual needs of the client.
2. Identify safe delivery of nursing care to restore, promote, maintain physical and mental health, and prevent illness.
3. Identify principles of growth and development, adapting care to meet physical, emotional, and social development for clients of all ages.
4. Identify legal and ethical principles in personal and vocational relationships, while assuming accountability and responsibility for delegation of duties to unlicensed personnel.
5. Comprehend competence in medication administration, return demonstration of medication administration skills, and adhere to medication administration guidelines that are within the scope of the student practical nurse.
6. Identify caring behaviors that promote client dignity, autonomy, and individually and seeking and attaining optimum health.
7. Assist in identifying learning needs specific to the individual's needs, developmental stage, and knowledge level.
8. Identify the role of the practical nurse, demonstrating competence and professionalism.

PN Theory I (PNUR 11210)
The knowledge, skills, and behaviors of the practical nurse are introduced. The focus is on the theoretical basis of fundamental/basic nursing concepts for adult patients. Course content focuses on an introduction to medical/surgical, geriatric, and psychiatric health care problems.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Successful completion of the Prerequisite courses and acceptance into the PN program. Corequisite: PN Practicum I (PNUR 11055)	Fall	Lecture: 10 Clinical: 0	10

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the nursing process and identification of basic physical, mental, emotional, sociocultural and spiritual needs of the client.
2. Identify safe delivery of nursing care to restore, promote, maintain physical and mental health, and prevent illness.
3. Identify principles of growth and development, adapting care to meet physical, emotional, and social development for clients of all ages.
4. Identify legal and ethical principles in personal and vocational relationships, while assuming accountability and responsibility for delegation of duties to unlicensed personnel.
5. Comprehend competence in medication administration, return demonstration of medication administration skills, and adhere to medication administration guidelines that are within the scope of the student practical nurse.
6. Identify caring behaviors that promote client dignity, autonomy, and individually and seeking and attaining optimum health.
7. Assist in identifying learning needs specific to the individual's needs, developmental stage, and knowledge level.
8. Identify the role of the practical nurse, demonstrating competence and professionalism.

PN Practicum II (PNUR 12055)
The student will provide direct patient care skills to patients of all ages. Stress is placed upon basic care, safety, and comfort of patients with a focus on body mechanics, nursing procedures, pharmacology, medical mathematics, laboratory and diagnostic procedures. Focus is on the role of the practical nurse in monitoring and administering medication, introduction to leadership/management and clinic nursing.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: A grade of C or higher in: PN Practicum I (PNUR 11055) AND PN Theory I (PNUR 11210). Corequisite: PN Theory II (PNUR 12110)	Spring	Lecture: 0 Clinical: 5	5

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the nursing process and identification of basic physical, mental, emotional, sociocultural and spiritual needs of the client.
2. Identify appropriate written and oral communication techniques with clients, family members, and associates with respect and empathy.
3. Use theory in clinical practice by functioning as a beginning member of the health care team, with a practical nurse scope of practice as outlined by the nurse practice act.
4. Identify safe delivery of nursing care to restore, promote, maintain physical and mental health, and prevent illness.
5. Identify principles of growth and development, adapting care to meet physical, emotional, and social development for clients of all ages.
6. Identify legal and ethical principles in personal and vocational relationships, while assuming accountability and responsibility for delegation of duties to unlicensed personnel.
7. Comprehend competence in medication administration, return demonstration of medication administration skills, and adhere to medication administration guidelines that are within the scope of the student practical nurse.
8. Identify caring behaviors that promote client dignity, autonomy, and individually and seeking and attaining optimum health.
9. Assist in identifying learning needs specific to the individual's needs, developmental stage, and knowledge level.
10. Identify the role of the practical nurse, demonstrating competence and professionalism.

PN Theory II (PNUR 12110)
This course builds upon the concepts taught in PN Theory I. The focus is on the theoretical nursing concepts for patients of all ages. Course content focuses on introduction to pediatrics and obstetrics while continuing to build upon medical/surgical, geriatric, and psychiatric health care problems.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: A grade of C or higher in: PN Practicum I (PNUR 11055) AND PN Theory I (PNUR 11210). Corequisite: PN Practicum II (PNUR 12055)	Spring	Lecture: 10 Clinical: 0	10

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the nursing process and identification of basic physical, mental, emotional, sociocultural and spiritual needs of the client.
2. Identify appropriate written and oral communication techniques with clients, family members, and associates with respect and empathy.
3. Use theory in clinical practice by functioning as a beginning member of the health care team, with a practical nurse scope of practice as outlined by the nurse practice act.
4. Identify safe delivery of nursing care to restore, promote, maintain physical and mental health, and prevent illness.
5. Identify principles of growth and development, adapting care to meet physical, emotional, and social development for clients of all ages.
6. Identify legal and ethical principles in personal and vocational relationships, while assuming accountability and responsibility for delegation of duties to unlicensed personnel.
7. Comprehend competence in medication administration, return demonstration of medication administration skills, and adhere to medication administration guidelines that are within the scope of the student practical nurse.
8. Identify caring behaviors that promote client dignity, autonomy, and individually and seeking and attaining optimum health.
9. Assist in identifying learning needs specific to the individual's needs, developmental stage, and knowledge level.
10. Identify the role of the practical nurse, demonstrating competence and professionalism.

PN Practicum III (PNUR 13052)
The student will provide direct patient care skills to patients of all ages. Stress continues to be placed upon basic care, safety, and comfort of patients with a focus on body mechanics, nursing procedures, pharmacology, medical mathematics, laboratory and diagnostic procedures. Emphasis is placed upon the role of the practical nurse in monitoring and administering medications and coordinating care for small groups of patients. Students will also complete the required number of hours working with an approved preceptor.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: A grade of C or higher in: PN Practicum II (PNUR 12055) AND PN Theory II (PNUR 12110). Corequisite: PN Theory III (PNUR 13054)	Summer	Lecture: 0 Clinical: 2	2

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the nursing process and identification of basic physical, mental, emotional, sociocultural and spiritual needs of the client.
2. Identify appropriate written and oral communication techniques with clients, family members, and associates with respect and empathy.
3. Use theory in clinical practice by functioning as a beginning member of the health care team, with a practical nurse scope of practice as outlined by the nurse practice act.
4. Identify safe delivery of nursing care to restore, promote, maintain physical and mental health, and prevent illness.
5. Identify principles of growth and development, adapting care to meet physical, emotional, and social development for clients of all ages.
6. Identify legal and ethical principles in personal and vocational relationships, while assuming accountability and responsibility for delegation of duties to unlicensed personnel.
7. Comprehend competence in medication administration, return demonstration of medication administration skills, and adhere to medication administration guidelines that are within the scope of the student practical nurse.
8. Identify caring behaviors that promote client dignity, autonomy, and individually and seeking and attaining optimum health.
9. Assist in identifying learning needs specific to the individual's needs, developmental stage, and knowledge level.
10. Identify the role of the practical nurse, demonstrating competence and professionalism.

PN Theory III (PNUR 13054)
This course builds upon the concepts taught in PN Theory I and II. The focus is on the theoretical nursing concepts for patients of all ages. Course content continues to build upon the concepts taught in pediatric, obstetric, medical/surgical, geriatric, and psychiatric health care problems.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: A grade of C or higher in: PN Practicum II (PNUR 12055) AND PN Theory II (PNUR 12110). Corequisite: PN Practicum III (PNUR 13052)	Summer	Lecture: 4 Clinical: 0	4

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the nursing process and identification of basic physical, mental, emotional, sociocultural and spiritual needs of the client.
2. Identify appropriate written and oral communication techniques with clients, family members, and associates with respect and empathy.
3. Use theory in clinical practice by functioning as a beginning member of the health care team, with a practical nurse scope of practice as outlined by the nurse practice act.
4. Identify safe delivery of nursing care to restore, promote, maintain physical and mental health, and prevent illness.
5. Identify principles of growth and development, adapting care to meet physical, emotional, and social development for clients of all ages.
6. Identify legal and ethical principles in personal and vocational relationships, while assuming accountability and responsibility for delegation of duties to unlicensed personnel.
7. Comprehend competence in medication administration, return demonstration of medication administration skills, and adhere to medication administration guidelines that are within the scope of the student practical nurse.
8. Identify caring behaviors that promote client dignity, autonomy, and individually and seeking and attaining optimum health.
9. Assist in identifying learning needs specific to the individual's needs, developmental stage, and knowledge level.
10. Identify the role of the practical nurse, demonstrating competence and professionalism.

General Psychology (PSYC 11003)

This course provides a critical analysis of the basic principles of psychology. Students will encounter theories and research relating to motivation, learning, personality, emotion, stress, abnormal behavior, methods of therapy, biology, developmental psychology, and social psychology. 3ACTS Equivalency Course ID: PSYC 1103 General Psychology.3333

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Compare and contrast major psychological schools of thought, including their historical foundations and key theoretical contributions.
2. Describe fundamental psychological research methods, including experimental design, data interpretation, and ethical considerations.
3. Explain how cognitive, biological, and social/cultural factors influence behavior and mental processes.
4. Apply psychological principles to analyze everyday situations and address real-world problems.

Abnormal Psychology (PSYC 20133)
This course provides an in-depth examination of abnormal behavior and mental disorders from psychological, biological, and sociocultural perspectives. Students will explore definitions and classifications of abnormality, historical and contemporary views of mental illness, and the diagnostic criteria outlined in the DSM.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: General Psychology (PSYC 11003)	Fall Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Summarize how historical and contemporary views have influenced the classification and understanding of abnormal behavior and mental disorders.
2. Describe the diagnostic criteria, symptoms, causes, and treatment approaches for psychological disorders.
3. Explain the legal, ethical, and psychological processes involved in criminal and civil commitment.

Developmental Psychology (PSYC 21003)
This course covers the physical, cognitive, and emotional growth and development of the individual from conception to death, including the examination of empirical findings and major psychological methods and theories.
ACTS Equivalency Course ID: PSYC 2103 Developmental Psychology.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe key research methods used in developmental psychology and explain how scientific inquiry informs understanding of human development.
2. Compare major theories of growth and development and explain how they apply across the human lifespan.
3. Analyze the psychosocial, biological, cognitive, and emotional aspects of development across all stages of life – from prenatal through late adulthood.

Introduction to Plant Science (PTSC 29103)
Agronomic and horticultural cropping systems including crop growth and development, crop physiology, crop ecology, environmental considerations and production and protection practices.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the stages of plant growth and development using scientific terminology related to plant anatomy and physiology.
2. Analyze the effects of soils composition, water availability, and nutrient management on plant health in various cropping systems.
3. Apply principles of integrated pest management (IPM) to identify control strategies for common pests, weeds, and diseases affecting crops.
4. Evaluate the role of biotechnology and genetic modification in crop improvement and agricultural sustainability.
5. Interpret environmental and ecological data to assess sustainable practices in plant production systems.

Introduction to Social Work (SCWK 20303)
This course provides an overview to the profession of social work. Students will be exposed to the history of the social work profession; understand the values, ethics, and philosophy of the social work profession; develop a basic understanding of current social work issues; and a general understanding of social work practices.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Describe the historical evolution and current state of the social work profession.
2. Explain key values, ethics, and philosophies of social work, including the NASW Code of Ethics.
3. Identify and discuss the social work values and policies that influenced the development of organized social work and continue to shape the profession today.
4. Demonstrate an introductory understanding of generalist social work practice within the empowerment framework.
5. Analyze how contemporary social issues affect vulnerable populations.
6. Describe the four foundational areas of social work education: policy, practice, human behavior and the social environment, and research.

Principles of Sociology (SOCI 10103)
Students gain an awareness of the relationship between individual experience and the wider society. This course promotes scientific examination of social institutions such as marriage, family, religion, education, health care, and political systems. Cultural assumptions regarding social stratification, gender, race, deviancy, and the environment are also discussed.
ACTS Equivalency Course ID: SOCI 1013 Introduction to Sociology.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Explain the relationship between individual experiences and broader societal structures, using sociological concepts.
2. Analyze the functions and dynamics of major social institutions, including marriage, family, religion, education, health care, and political systems.
3. Evaluate cultural assumptions and perspectives on social stratification, gender, race, deviancy, and environmental issues.
4. Apply sociological theories and methods to understand contemporary social issues and patterns.

Social Problems (SOCI 20103)
Students will apply sociological concepts and methods to the analysis of current social problems in the United States, including family and community disorganization, delinquency and crime, mental illness, and intergroup relations.
ACTS Equivalency Course ID: SOCI 2013 Social Problems.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Analyze contemporary social problems in the United States using sociological concepts and frameworks.
2. Examine the causes and consequences of issues such as family and community disorganization, delinquency, crime, and mental illness.
3. Evaluate the impact of intergroup relations on social problems, including factors like race, ethnicity, and socioeconomic status.
4. Apply sociological methods to propose potential solutions to current social issues.

Spanish I (SPAN 10103)
Basic skills in listening to, speaking, reading, and writing beginning Spanish.
ACTS Equivalency Course ID: SPAN 1013 Spanish I.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 3 Lab: 0	3

Course Learning Outcomes

1. Listening: Understanding short learned and some sentence length utterances, particularly where context strongly supports understanding and speech is clearly audible.
2. Speaking: Respond to simple questions and statements involving learned materials.
3. Reading: Understand familiar written language as used in practical daily life involving learned vocabulary.
4. Writing: Write simple, fixed expressions, limited memorized material and some recombinations.
5. Culture: Demonstrate elementary knowledge of important aspects of contemporary Spanish – speaking culture.

Spanish II (SPAN 10203)
This course is a further development of skills practiced in SPA 1003 Spanish I.
ACTS Equivalency Course ID: SPAN 1023 Spanish II.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Spanish I (SPAN 10103)	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 3 Lab: 0	3

Course Learning Outcomes

1. Listening: Understand short learned and some sentence-length utterances, particularly where context strongly supports understanding and speech is clearly audible.
2. Speaking: Respond to simple questions and statements involving learned materials.
3. Reading: Understand familiar written language as used in practical daily life involving learned vocabulary.
4. Writing: Write simple, fixed expressions, limited memorized material, and some recombinations.
5. Culture: Demonstrate elementary knowledge of important aspects of contemporary Spanish – speaking culture.

Spanish III (SPAN 20103)
This course focuses on intermediate development of Spanish language skills.
ACTS Equivalency Course ID: SPAN 2013 Spanish III.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Spanish II (SPAN 10203)	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 3 Lab: 0	3

Course Learning Outcomes

1. Listening: Sustained understanding over longer stretches of connected discourse on a number of topics pertaining to different times and places.
2. Speaking: Participate successfully in uncomplicated communicative tasks and social situations. Initiate, sustain, and close a general conversation with a number of strategies appropriate to a range of circumstances and topics.
3. Reading: Read consistently with full understanding simple connected texts dealing with basic personal and social needs about which the reader has personal interest and/or knowledge.
4. Writing: Meet most practical writing needs and limited social demands. Can take notes in some detail on familiar topics and respond in writing to personal questions. Can write simple letters, brief synopses and paraphrases, summaries of biographical data, work and school experience.
5. Culture: Demonstrate increased knowledge and awareness of and sensitivity to important aspects of contemporary Spanish-speaking culture.

Spanish IV (SPAN 20203)
This course is a continuation of intermediate language skill development begun in SPA 20203 Spanish III.
ACTS Equivalency Course ID: SPAN 2023 Spanish IV

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: Spanish III (SPAN 20103)	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 3 Lab: 0	3

Course Learning Outcomes

1. Listening: Sustained understanding over longer stretches of connected discourse on a number of topics pertaining to different times and places.
2. Speaking: Participate successfully in uncomplicated communicative tasks and social situations. Initiate, sustain, and close a general conversation with a number of strategies appropriate to a range of circumstances and topics.
3. Reading: Read consistently with full understanding simple connected texts dealing with basic personal and social needs about which the reader has personal interest and/or knowledge.
4. Writing: Meet most practical writing needs and limited social demands. Can take notes in some detail on familiar topics and respond in writing to personal questions. Can write simple letters, brief synopses and paraphrases, and summaries of biological data, work and school experience.
5. Culture: Demonstrate increased knowledge and awareness of and sensitivity to important aspects of contemporary Spanish-speaking culture.

Oral Communication (SPCH 10003)

This course develops essential communication skills for personal, professional, and civic success, emphasizing compelling presentations, critical thinking, and effective listening across varied contexts, including digital environments. Through the composition of speeches and other oral presentations, students will gain confidence in crafting influential arguments and adapting their communication to diverse audiences. Moreover, the course integrates interpersonal and small group theory to improve competency in a range of communication settings.

ACTS Equivalency Course ID: SPCH 1003 Introduction to Oral Communication.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Analyze and evaluate various forms of communication, demonstrating critical thinking and active listening skills.
2. Conduct ethical research and organize information effectively for oral presentations.
3. Deliver well-structured, compelling oral presentations that demonstrate effective verbal and nonverbal communication.
4. Apply knowledge of communication theory to improve communication practices and outcomes.
5. Adapt the use of presentation technology to the audience and presentation context, responding to audience feedback and technical challenges.

Technical Methods (TECH 10153)
Introduces professional concepts and skill sets required for successful careers in the disciplines of Industrial and Construction Technology. Students will be expected to demonstrate competencies in basic safety, construction mathematics, hand tools, power tools, construction drawings, material handling, basic rigging, basic communication skills, and basic employability skills.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring	Lecture: 2 Lab: 1	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Demonstrate safety principles and guidelines for construction and industrial work.
2. Calculate equations using essential math skills.
3. Demonstrate proper use and maintenance of hand and power tools.
4. Demonstrate career readiness communication skills.

Engineering Drawings (TECH 10253)
Provides instruction in the interpretation of mechanical part drawings, electrical schematic drawings, process piping and instrumentation diagrams, and other common drawings used in industry. Introduction to drawing tools and practice in drawing sketches are done in a lab setting.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring	Lecture: 1 Lab: 2	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify and interpret all needed information of engineering drawings.
2. Perform calculations involving fractions, decimals, and the SI metric system for drawing interpretation.
3. Create engineering drawings, including all needed information to create desired projects.
4. Evaluate accuracy of print to manufactured part.

DC Electricity (TECH 10353)
Introduces the principles of DC electricity to include voltage, current, and resistance. Engineering notation, use of metric prefixes, and algebraic analysis of series and parallel circuits are taught. Laboratory experiments teach use of a digital multimeter to test components and to analyze circuits.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring	Lecture: 2 Lab: 1	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Define the fundamental concepts of DC electricity.
2. Describe the properties and applications of basic electronic components.
3. Calculate values in basic DC circuits using Ohm's Law and Kirchhoff's Law.
4. Construct operational DC circuits.
5. Demonstrate troubleshooting of common problems in DC circuits.
6. Identify values in DC circuits using a multimeter.

AC Electricity (TECH 10453)

This course introduces the principles of AC electricity to include capacitance and inductance. Series and parallel AC circuits are analyzed mathematically and in laboratory experiments. Instruction in the use of digital multimeters and the use of oscilloscopes is conducted in class and in laboratories.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite:	Fall	Lecture: 2	3
DC Electricity (TECH 10353)	Spring	Lab: 1	

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify the unique advantages of AC electricity.
2. Identify residential electrical components.
3. Illustrate wiring diagrams for common circuits.
4. Calculate hardware requirements for residential branch circuits.
5. Safely wire basic residential electrical circuits.
6. Utilize a multimeter to troubleshoot AC circuits.

Industrial Safety (TECH 20053)
This course provides the opportunity for students to explore the development of safety and health movement in the United States. The course focuses on identification of the causes and effects of accidents in the industrial workplace and covers several important topics including the Occupational Safety and Health Administration (OSHA), ergonomic factors, common hazards found in the workplace, and the roles of managers and health and safety personnel concerning industrial safety.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify and evaluate workplace hazards and their safety implications.
2. Create plans to mitigate workplace hazards.
3. Develop and demonstrate strategies to promote a culture of safety in the workplace.
4. Complete the OSHA 30 certification.

Electric Motor Control (TECH 20153)
This course provides theory and hands-on experience with electric motor controls. Topics include single and three-phase AC and DC motors, motor control circuits, wiring practices, control hardware, safe work practices, troubleshooting skills, and use of specialized electrical tools. Lab experiments will also include variable speed drives and AC inverter duty motors.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: AC Electricity (TECH 10453)	Spring	Lecture: 2 Lab: 1	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify the components of motor control circuits.
2. Describe the basic functions of motor control circuits.
3. Construct motor control circuits.
4. Troubleshoot and correct common motor control circuit problems.

Industrial Technology Capstone (TECH 21054)

The Industrial Technology Capstone course provides an opportunity for students to demonstrate mastery of a broad range of learning objectives and outcomes from the Industrial Technology program at UACCB. The course provides instruction in process control and control fundamentals and presents students with problems requiring teamwork and integration of previous learning in electrical, mechanical, and electronics disciplines. Course assessments focus on application of applicable theory in a student-centered and student-directed manner requiring analysis and synthesis of Industrial Technology knowledge and skills in a laboratory environment. The course also focuses on Industrial Technology as a career by preparing students for employment through online job searches, preparation of resumes, site visits, and job fairs.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Spring	Lecture: 3 Lab: 1	4

Course Learning Outcomes By the end of this course, students will be able to:

1. Design and construct an operational machine that fulfills a customer requirement.
2. Apply technical and problem-solving skills from previous coursework.
3. Work with classmates in a respectful and productive manner.

Mechanical Drive Systems (TECH 24303)
This comprehensive course covers installation, troubleshooting, and alignment and adjustment techniques and issues. In addition to mechanical drives, it addresses lubrication and the use, reading, and interpretation of various measuring instruments and devices.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Corequisite: Technical Mathematics (MATH 10103) OR College level math course.	Spring	Lecture: 2 Lab: 1	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify industrial power transmission systems.
2. Describe the pros and cons of various industrial power systems.
3. Construct industrial power transmission systems.
4. Perform shaft alignment procedures to align an industrial motor with a fixed piece of driven equipment.
5. Troubleshoot and correct problems with various mechanical drive systems.

Theater (THTR 10003)
An introductory survey of theatre arts including history, dramatic works, stage techniques, production procedures, as it relates to the fine arts, society, and the individual.
ACTS Equivalency Course ID: DRAM 1003 Theatre Appreciation.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	This course is not currently offered but is accepted for transfer credit toward applicable degree requirements.	Lecture: 3 Lab: 0	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Identify key theatrical terms, major genres, styles, and historical periods in theatre arts.
2. Describe how theatrical performance reflects and influences social, cultural, and historical contexts and the function of theatre in society and individual expression.
3. Summarize the roles and contributions of various theatrical artists within the collaborative production process.
4. Critique a live theatre performance using appropriate theatrical terminology.

Commercial Vehicle Driving (TRDR 19107)
The Commercial Vehicle Driving course prepares students for entry into the trucking and logistics industry. Students explore career opportunities and requirements of a professional tractor trailer driver. Students study vehicle safety, accident prevention, operating regulations, cargo handling, documentation procedures, pre-trip preparation, vehicle inspection, maintenance, service, control procedures, backing, coupling, uncoupling, maneuvering, road and hazardous driving skills, and licensing requirements.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 6 Lab: 1	7

Course Learning Outcomes By the end of this course, students will be able to:

1. Conduct a comprehensive pre-trip vehicle inspection to identify potential safety hazards and ensure compliance with federal and state regulations.
2. Demonstrate proper cargo handling and documentation procedures to ensure compliance with industry regulations and safe transport.
3. Execute essential vehicle control maneuvers, including backing, turning, coupling, and uncoupling, with precision and safety.
4. Apply defensive driving techniques to safely operate a commercial vehicle under various road and environmental conditions, including hazardous driving scenarios.
5. Develop a detailed trip plan incorporating route selection, fuel management, and regulatory considerations to ensure efficient and compliant operations.

Foundations of Personal Finance (UNIV 10071)
This course introduces students to the importance of responsible money management both today and in the future. Topics include personal spending and budgeting, personal banking basics, credit scores, education financing, investing, retirement, and financial decision-making process.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 1 Lab: 0	1

Course Learning Outcomes By the end of this course, students will be able to:

1. Analyze the key components of responsible money management.
2. Evaluate the importance of financial planning.
3. Examine how educational financing operates and assess how that relates directly to you.

Strategies for College Success (UNIV 10173)
An orientation designed to assist students in developing strategies for meeting the demands of college life. Topics include making the transition to college, becoming motivated for success, managing one's time more effectively, reading a textbook, taking lecture notes and examinations, making decisions, seeking and selecting a career, and locating and using various campus resources.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring	Lecture: 3 Lab: 0	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Evaluate the expectations and responsibilities of a college student.
2. Locate and utilize college and community resources.
3. Demonstrate effective time management and study skills.
4. Develop a plan for future college and career success.

Maintenance Welding (WELD 10053)

This course introduces students to the fundamentals of welding with an emphasis on safe work practices, proper tool use, and hands-on skill development. Students will learn basic welding processes, including Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), and Gas Tungsten Arc Welding (GTAW), and develop foundational skills in equipment setup, joint preparation, electrode and filler metal selection, and proper welding techniques. Instruction covers reading simple fabrication drawings, measuring and marking materials, and performing basic welds on various joint types. Emphasis is placed on weld quality, accuracy, and adherence to industry safety standards. Upon completion, students will be prepared for entry-level industrial maintenance welding roles or further training in welding and fabrication.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring	Lecture: 0 Lab: 3	3

Course Learning Outcomes

By the end of this course, students will be able to:

1. Explain the safety procedures and proper use of welding equipment for SMAW, GMAW, and GTAW in an industrial maintenance environment.
2. Demonstrate proper setup, joint preparation, and welding techniques on basic butt, lap, and fillet joints using SMAW, GMAW, and GTAW.
3. Interpret basic fabrication drawings and measurements to accurately lay out welding projects according to specifications.
4. Evaluate the quality of welds by inspecting for defects, proper penetration, and adherence to industry welding standards.

Introduction to Thermal Cutting (WELD 10084)
Introduction to SMAW is purposed to provide secondary area career center welding students with the Prerequisite knowledge, skill sets, and required time on task to be academically successful in IND-1104 Welding I. This course is structured for students interested in learning the tools and equipment required to be an entry level employee in the welding industry. Students will gain hands-on experience with SMAW electrodes, Weld Quality, SMAW Beads and Fillet Welds. This course requires students to wear several items of person protection equipment. Contact the course instructor for the required list of welding equipment. Shop procedures are strictly enforced to maintain a safe and efficient learning environment.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	This course is not currently offered.	Lecture: 3 Lab: 1	4

Course Learning Outcomes By the end of this course, students will be able to:

1. Identify equipment utilized in thermal cutting, metal preparation, and welding.
2. Identify consumables utilized in thermal cutting, metal preparation, and welding.
3. Prepare and utilize thermal cutting equipment.
4. Prepare and utilize welding equipment.
5. Demonstrate safe practices while conducting cutting, metal preparation, and welding procedures.

Introduction to Sheet Metal (WELD 10783)
This class provides students with basic knowledge and practice with tools and equipment found in a residential metal shop. Pressure drops and velocity calculations necessary for duct design are covered. This laboratory intensive course provides students with considerable 'hands-on' practice with professional-grade tools found in a sheet metal shop.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	This course is not currently offered.	Lecture: 2 Lab: 1	3

Course Learning Outcomes By the end of this course, students will be able to:

1. Summarizes the history and development of the sheet metal trade, explains the benefits of apprenticeship training, and identifies career opportunities in the trade.
2. Describes the hand and power tools used in the sheet metal trade, including layout tools and cutting, bending, and forming machines. Includes safety and maintenance guidelines.
3. Introduces parallel line development, radial line development, and triangulation. Covers selection and use of layout, hand, and machine tools. Discusses how to transfer patterns, and how to cut, form, and assemble parts.
4. Builds on trainee's basic math skills to solve trade problems. Covers calculations using volume calculations, English-metric system convers basic geometry, and calculation of stretch outs.
5. Covers the steps involved in using the parallel line development method to lay out fittings and includes step-by-step procedures for selected fittings.
6. Addresses ductwork assembly, use of different types of sealants, using lifts, and installation of ductwork. Describes the types of fasteners (screws, nuts, bolts, and rivets) and supports used in an air distribution system. Discusses proper spacing of hangers, load ratings, and installation of hangers and support systems.
7. Describes how air distribution accessories, such as louvers, dampers, and access doors, function as part of an air distribution system. Includes installation guidelines and checklists.
8. Describes how to install fiberglass blanket, foam, and pipe insulation using approved adhesives and fastening techniques. Also includes the fabrication and installation of fitting covers and preformed fitting covers.

Sheet Metal Arc Welding (SMAW) (WELD 11084)

This course is designed for students interested in pursuing a career as a construction welder or in a repair shop. Throughout the program, students will delve into various aspects of welding, including safety measures, potential career paths, metallurgy, welding equipment and processes, welding electrical theory, and the interpretation of welding procedure specifications, welding drawings and symbols. The primary focus of this course is Shielded Metal Arc Welding (SMAW), and students will develop and showcase their welding skills through different joint designs such as inside corner, outside corner, lap, butt, "T", and open v-groove. Students will have opportunities to obtain American Welding Society certifications.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring	Lecture: 0 Lab: 4	4

Course Learning Outcomes By the end of this course, students will be able to:

1. Implement welding and shop safety protocols to minimize workplace incidents.
2. Develop expertise in interpreting welding procedure sheets, welding prints and symbols to facilitate effective communication.
3. Demonstrate efficiency in electrode selection and equipment setup for Shielded Metal Arc Welding.
4. Exhibit industry-standard welding skills in performing various joints with the process of Shielded Metal Arc Welding.

Gas Metal Arc Welding (GMAW) (WELD 12084)

This course is designed for students interested in pursuing a career as a production welder or fabricator. Throughout the program, students will delve into various aspects of welding, including safety measures, potential career paths, metallurgy, welding equipment and processes, welding electrical theory, and the interpretation of welding procedure specifications, welding drawings and symbols. The primary focus of their course is Gas Metal Arc Welding (GMAW) and students will develop and showcase their welding skills through different joining designs such as inside corner, outside corner, lap, butt, "T", and open v-groove. Students will have opportunities to obtain American Welding Society certifications.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring Summer	Lecture: 0 Lab: 4	4

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply welding and shop safety protocols, reducing workplace incidents.
2. Develop expertise in interpreting welding procedure sheets, welding prints and symbols correlating to Gas Metal Arc Welding process to facilitate effective communication.
3. Demonstrate efficiency in electrode selection and equipment setup for Gas Metal Arc Welding.
4. Demonstrate industry-standard welding proficiency in executing various joints in the process of Gas Metal Arc Welding.

Gas Tungsten Arc Welding (GTAW) (WELD 13084)
This course is structured for students interested in employment as a production welder, in fabrication, or in a repair shop. Students will study welding safety, career opportunities, metallurgy, welding equipment and processes, welding electrical theory, and welding drawing/welding symbol interpretation. Students gain hands-on experience with basic Oxyfuel gas cutting, and Gas Tungsten Arc Welding (GTAW) in the American Welding Society 1G/F, 2G/F, 3G/F, and 4G/F positions on carbon steel, stainless steel and aluminum. Welding skills that will be developed and assessed include making GTAW stringer, weave, walking the cup, and overlapping beads, corner welds, fillet welds, V-groove welds, and open-root V-groove welds. This course requires students to wear several items of personal protection equipment. Shop procedures are explained, constantly emphasized, and strictly enforced. Students will have an opportunity to certify as American Welding Society Level I – Entry Welder, GTAW, Plate.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
	Fall Spring	Lecture: 0 Lab: 4	4

Course Learning Outcomes By the end of this course, students will be able to:

1. Apply welding and shop safety protocols, reducing workplace incidents.
2. Develop expertise in interpreting welding procedure sheets, welding prints and symbols correlating to Gas Tungsten Arc Welding process to facilitate effective communication.
3. Demonstrate efficiency in electrode selection and equipment setup for Gas Tungsten Arc Welding.
4. Demonstrate industry-standard welding proficiency in executing joints in the process of gas tungsten arc welding.

Pipe and Tube Welding (WELD 14084)

This course offers advanced training designed to prepare students for employment in pipeline construction, refineries, and the electrical power industry. Instruction covers welding safety, career opportunities, metallurgy, welding equipment and processes, electrical theory as it applies to welding, and the interpretation of welding drawings and symbols.

Students will gain extensive hands-on experience in advanced Oxyfuel welding and cutting, Shielded Metal Arc Welding (SMAW), and Gas Tungsten Arc Welding (GTAW), practicing in the American Welding Society (AWS) 2G, 5G, and 6G positions on 2-inch and 6-inch pipe and tubing. Welding skills will be developed on steel, stainless steel, and other alloys, with particular focus on SMAW and GTAW open-root radial welds.

Co/Prerequisites	Typical Term Offered	Contact Hours	Credit Hours
Prerequisite: A grade of C or higher in: SMAW (WELD 11084) AND GTAW (WELD 13084)	Fall Spring	Lecture: 0 Lab: 4	4

Course Learning Outcomes

By the end of this course, students will be able to:

1. Implement welding and shop safety protocols to minimize workplace incidents.
2. Demonstrate expertise in interpreting welding procedure sheets, welding prints and symbols to facilitate effective communication.
3. Demonstrate efficiency in electrode selection and equipment setup for Shielded Metal Arc Welding and Gas Tungsten Arc Welding.
4. Exhibit industry-standard welding skills in performing radial joint weld with the processes of Shielded Metal Arc Welding and Gas Tungsten Arc Welding.