



WRCTE South Course Titles & Descriptions

2024-2025

Auto I

7213 - Principles of Automotive Services

Principles of Automotive Services gives students an overview of the operating and general maintenance systems of the modern automobile. Students will be introduced to the safety and operation of equipment and tools used in the automotive industry. Students will study the maintenance and light repair of automotive systems. Also, this course gives students an overview of the electrical operating systems of the modern automobile. Students will be introduced to the safety and operation of equipment and tools used in the electrical diagnosis and repair in the automotive electrical industry. Students will study the fundamentals of electricity and automotive electronics.

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: None
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

7205 - Automotive Brakes & Electrical

Brake Systems teaches theory, service, and repair of automotive braking systems. This course provides an overview of various mechanical brake systems used on today's automobiles. This course will emphasize professional diagnosis and repair methods for brake systems.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Automotive Services
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Schools partnering with Vincennes University must offer the program of study as part of a 2-3 period block

7212 - Engine & Driveline Performance

Steering and Suspensions will cover driveline theory and in-car service procedures. Theory and overhaul procedures related to the driveshaft and axle assemblies for front and rear wheel drive vehicles are included as well. Additionally, the course teaches theory, service and repair of automotive steering, and suspension systems. It provides an overview of various mechanical, power, and electrical steering and suspension systems used on today's automobiles and will emphasize professional diagnosis and repair methods for steering and suspension systems.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Automotive Services; Brake Systems
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Schools partnering with Vincennes University must offer the program of study as part of a 2-3 period block

Auto II

7375 - Automotive Services Capstone

Automotive Service Capstone further explores important skills and competencies within the Automotive Service Technology Pathway. Students will be exposed to an in-depth study of vehicle electrical systems. The course will cover the fundamentals of electricity and automotive electronics in various automotive systems. Students will understand other topics such as engine repair, climate control, and driveline service. Additionally, Co-Op and Internship opportunities will be available for students.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Automotive Services; Brake Systems; Steering and Suspensions
- Recommended Prerequisites: None
- 2 semester course, 2 semester required, 1-3 credits per semester, 6 credits max
- Counts as a directed elective or elective for all diplomas

Construction I

7130 - Principles of Construction Trades

Principles of Construction Trades provides students with the basic skills needed to continue in a construction trade field. Covered topics include an introduction to the types and uses for common hand and power tools, learning the types and basic terminology associated with construction drawings, and basic worksite safety. Additionally, students study the roles of individuals and companies within the construction industry. Emphasis is placed on the importance of mathematical and communication skills within the construction industry.

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: None
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

7123 - Construction Trades: General Carpentry

Construction Trades: General Carpentry builds upon the skills learned in the Principles of Construction Trades and examines the basics of framing. Students learn the procedures for laying out and constructing floor systems, wall systems, and ceiling joists. Students also spend time learning the principles of roof framing, and basic stair layout. Additionally, students will be introduced to building envelope systems.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Construction Trades; or Principles of Architecture, Engineering and Construction
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

7122 - Construction Trades - Framing & Finishing

Construction Trades: Framing and Finishing prepares students with advanced framing skills along with interior and exterior finishing techniques. Covered topics include roofing applications, thermal and moisture protection, exterior finishing, cold-formed steel framing, drywall installation and finishing, doors and door hardware, suspended ceilings, window, door, floor, and ceiling trim, and cabinet installation.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Construction Trades; Construction Trades: General Carpentry
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

Construction II

7242 - Construction Trades Capstone

The Construction Trades Capstone covers the basics of electricity and working with concrete. Electrical topics include the National Electric Code, electrical safety, electrical circuits, basic electrical construction drawings, and residential electrical services. Students may also gain an understanding of concrete properties, foundations, slab-on-grades, and vertical and horizontal formwork. The course prepares students for the NCCER Carpentry Forms Level 3 and Electrical Level 1 Certificates.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Construction Trades; Construction Trades: General Carpentry; and Construction Trades: Framing and Finishing
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a directed elective or elective for all diplomas
- Counts as a quantitative reasoning course

Cosmetology I

7330 - Principles of Cosmetology

Principles of Barbering and Cosmetology offers an introduction to cosmetology with emphasis on basic practical skills and theories including roller control, quick styling, shampooing, hair coloring, permanent waving, facials, manicuring, business and personal ethics, and bacteriology and sanitation. Successful completion of the course requires at least 375 Cosmetology studio hours.

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: None
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Principles and Fundamentals should be concurrently enrolled if offering for Dual Credits. This course may require extended hours of participation in order to meet the 1500 hours required for the Cosmetology and Barbering exams.

7331 - Cosmetology Fundamentals

Barbering and Cosmetology Fundamentals focuses on the development of practical skills introduced in Principles of Barbering and Cosmetology. Clinical application and theory in the science of barbering and cosmetology are introduced. Successful completion of the course requires at least 375 Cosmetology studio hours.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Barbering and Cosmetology
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- Principles and Fundamentals should be concurrently enrolled. This course may require extended hours of participation in order to meet the 1500 hours required for the Cosmetology and Barbering exams.

7332 - Advanced Cosmetology

Advanced Cosmetology will emphasize the development of advanced skills in styling, hair coloring, permanent waving, facials, manicuring, chemical texturizing, and hair cutting techniques. Students will also further study anatomy and physiology as it applies to hair care professions. Successful completion of the course requires at least 375 studio hours.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Barbering and Cosmetology; Barbering and Cosmetology Fundamentals
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- This course should be controlled with TSD. This course may require extended hours of participation in order to meet the 1500 hours required for the Cosmetology and Barbering exams.

Cosmetology II

7334 - Cosmetology Capstone

Barbering and Cosmetology Capstone builds and improves previously developed skills with emphasis on developing individual techniques. Professionalism, shop management, psychology in relation to barbering and cosmetology, and preparation for state board examinations are stressed. Successful completion of the course requires at least 375 studio hours.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Barbering and Cosmetology; Barbering and Cosmetology Fundamentals; Advanced Cosmetology or Advanced Barbering
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas
- This course may require extended hours of participation in order to meet the 1500 hours required for the Cosmetology and Barbering exams

Criminal Justice I

7193 - Principles of Criminal Justice

Principles of Criminal Justice covers the purposes, functions, and history of the three primary parts of the criminal justice system: law enforcement, courts, and corrections. This course further explores the interrelationships and responsibilities of these three primary elements of the criminal justice system.

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: None
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

7191 - Law Enforcement & Cultural Awareness

Law Enforcement Fundamentals critically examines the history and nature of the major theoretical perspectives in criminology and the theories found within those perspectives. Students analyze the research support for such theories and perspectives and the connections between theory and criminal justice system practice within all the major components of the criminal justice system. The course will allow students to demonstrate the application of specific theories to explain violent and non-violent criminal behavior on both the micro and macro levels of analysis. Additionally, this course will introduce fundamental law enforcement operations and organization. This includes the evolution of law enforcement at federal, state, and local levels.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Criminal Justice
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

7188 - Courts & Corrections

Corrections and Cultural Awareness emphasizes the study of American criminal justice problems and systems in historical and cultural perspectives, as well as discussing social and public policy factors affecting crime. Multidisciplinary and multicultural perspectives are stressed. Additionally, this course takes a further examination of the American correctional system and the study of administration of local, state, and federal correctional agencies. The examination also includes the history and development of correctional policies and practices, criminal sentencing, jails, prisons, alternative sentencing, prisoner rights, rehabilitation, and community corrections including probation and parole. Current philosophies of corrections and the debates surrounding the roles and effectiveness of criminal sentences, institutional procedures, technological developments, and special populations are discussed.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Criminal Justice; Law Enforcement Fundamentals
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

Education Professions I

7161 - Principles of Teaching

This course provides a general introduction to the field of teaching. Students will explore educational careers, teaching preparation, and professional expectations as well as requirements for teacher certification. Current trends and issues in education will be examined. A minimum 20 hour classroom observation experience is required for successful completion of this course.

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: None
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

7157 - Child & Adolescent Development

Child and Adolescent Development examines the physical, social, emotional, cognitive, and moral development of the child from birth through adolescence with a focus on the middle years through adolescence. Basic theories of child development, biological and environmental foundations of development, and the study of children through observation and interviewing techniques are explored. The influence of parents, peers, the school environment, culture, and the media are discussed. An observation experience up to 20 hours may be required for completion of this course. This course has been approved to be offered for dual credit. Students pursuing this course for dual credit are still required to meet the minimum prerequisites for the course and pass the course with a C or better in order for dual credit to be awarded.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Teaching
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

7162 - The Exceptional Child

Teaching and Learning provides students the opportunity to apply many of the concepts that they have learned throughout the Education Professions pathway. In addition to a focus on best practices, this course will provide an introduction to the role that technology plays in the modern classroom. Through hands-on experience with educational software, utility packages, and commonly used microcomputer hardware, students will analyze ways to integrate technology as a tool for instruction, evaluation, and management.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Teaching
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

Education Professions II

7267 - Education Professions Capstone

The Education Professions Capstone provides an extended opportunity for field experience to further apply concepts that have been presented throughout the pathway. Students will also have the opportunity to explore the topics of exceptional child and literacy development through children's literature. Students will gain a deeper understanding of inclusive teaching techniques along with policies, theories, and laws related to special education. Students interested in pursuing a career in Elementary Education are encouraged to also study the benefits of using children's literature in the classroom. This course may be further developed to include specific content for students interested in pursuing a career in secondary education. The course should include a significant classroom observation and assisting experience.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Teaching; Child and Adolescent Development, Teaching and Learning
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

Emergency Medical Services (EMS)

7168 - Principles of Healthcare

Principles of Healthcare content examines skills common to specific health career topics such as patient nursing care, dental care, animal care, medical laboratory, public health, and an introduction to healthcare systems. Lab experiences are organized and planned around the activities associated with the student's career objectives.

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: None
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

5274 - Medical Terminology

Medical Terminology prepares students with language skills necessary for effective, independent use of health and medical reference materials. It includes the study of health and medical abbreviations, symbols, and Greek and Latin word part meanings, all taught within the context of body systems. This course builds skills in pronouncing, spelling, and defining new words encountered in verbal and written information in the healthcare industry. Students have the opportunity to acquire essential skills for accurate and logical communication, and interpretation of medical records. Emphasis is on forming a foundation of a medical vocabulary including appropriate and accurate meaning, spelling, and pronunciation of medical terms, abbreviations, signs, and symbols.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Healthcare or Principles of Pharmacy Tech
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, maximum of 2 credits
- Counts as a directed elective or elective for all diplomas

7165 - Emergency Medical Tech

The Emergency Medical Technician (EMT) course is based on the training program developed by the Department of Transportation and the Emergency Medical Services Commission of Indiana. It covers theories, techniques, and operational aspects of pre-hospital emergency care within the scope and responsibility of the emergency medical technician (EMT). It requires laboratory practice and clinical observation in a hospital emergency room and ambulance. Successful completion of the course meets national requirements to test for certification as an NREMT.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Healthcare; Medical Terminology
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas.
- Schools are strongly encouraged to offer the EMT course along with Principles of Healthcare and Medical Terminology as part of a 3 period block of time

Equipment Operation

7130 - Principles of Construction Trades

Principles of Construction Trades provides students with the basic skills needed to continue in a construction trade field. Covered topics include an introduction to the types and uses for common hand and power tools, learning the types and basic terminology associated with construction drawings, and basic worksite safety. Additionally, students study the roles of individuals and companies within the construction industry. Emphasis is placed on the importance of mathematical and communication skills within the construction industry.

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: None
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

7290 - Equipment Operation Fundamentals

Heavy Equipment Fundamentals orients students to the Heavy Equipment industry and the basics operational techniques required to be a Heavy Equipment Operator. Covered topics include: jobsite safety, identification of heavy equipment, utility tractors, earthmoving, and grades. This course prepares students for the NCCER Heavy Equipment Level 1 Certification.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Construction Trades
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

7291 - Advanced Equipment Operation

Advanced Heavy Equipment Operations builds upon the earthmoving knowledge learned in Heavy Equipment Fundamentals. Students will gain the necessary skills and knowledge regarding soils, excavation math, and interpreting Civil Drawings to be able to prepare a site. Additionally students will learn to operate scrapers used in site preparation. This course will prepare students for the first half of the NCCER Heavy Equipment Operations Level 2.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Construction Trades; Heavy Equipment Fundamentals
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

Graphic Design I

7140 - Principles of Digital Design

Principles of Digital Design introduces students to fundamental design theory. Investigations into design theory and color dynamics will provide experiences in applying design theory, ideas and creative problem solving, critical peer evaluation, and presentation skills. Students will have the opportunity to apply the design theory through an understanding of basic photographic theory and technique.

Topics will include image capture, processing, various output methods, and light. ●

Recommended Grade(s): 9, 10, 11 ● Required Prerequisites: None ●

Recommended Prerequisites: None ● 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum ● Counts as a directed elective or elective for all diplomas

7141 - Digital Design Graphics

Digital Design Graphics will help students to understand and create the most common types of computer graphics used in visual communications. Skills are developed through work with professional vector-based and page layout software used in the industry. Additionally, students will be introduced to a full range of image input technology and manipulation including conventional photography, digital imaging, and computer scanners. Students will learn to communicate concepts and ideas through various imaging devices.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Digital Design
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

5550 - Graphic Design and Layout

Graphic Design and Layout teaches design process and the proper and creative use of type as a means to develop effective communications for global, corporate and social application. Students will create samples for a portfolio, which may include elements or comprehensive projects in logo, stationery, posters, newspaper, magazine, billboard, and interface design.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Digital Design; Digital Design Graphics
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

Graphic Design II

7246 - Digital Design Capstone

The Digital Design Capstone course provides students the opportunity to dive deeper into advanced concepts of Visual Communication including user experience/user interface design, video production editing, animation and/or web design. Depending on the length of the course, students may focus their efforts on one area or explore multiple aspects.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Digital Design Concentrator Sequence
- Recommended Prerequisites: None
- 2 semester course, 2 semester required, 1-3 credits per semester, 6 credits max
- Counts as a Directed Elective or Elective for all diplomas

Health Careers I

7168 - Principles of Healthcare

Principles of Healthcare content examines skills common to specific health career topics such as patient nursing care, dental care, animal care, medical laboratory, public health, and an introduction to healthcare systems. Lab experiences are organized and planned around the activities associated with the student's career objectives.

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: None
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

5274 - Medical Terminology

Medical Terminology prepares students with language skills necessary for effective, independent use of health and medical reference materials. It includes the study of health and medical abbreviations, symbols, and Greek and Latin word part meanings, all taught within the context of body systems. This course builds skills in pronouncing, spelling, and defining new words encountered in verbal and written information in the healthcare industry. Students have the opportunity to acquire essential skills for accurate and logical communication, and interpretation of medical records. Emphasis is on forming a foundation of a medical vocabulary including appropriate and accurate meaning, spelling, and pronunciation of medical terms, abbreviations, signs, and symbols.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Healthcare or Principles of Pharmacy Tech
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, maximum of 2 credits
- Counts as a directed elective or elective for all diplomas

7166 - Healthcare Specialist: CNA

The Healthcare Specialist: CNA course prepares individuals desiring to work as nursing assistants with the knowledge, skills, and attitudes essential for providing basic care in extended care facilities, hospitals, and home health agencies under the direction of licensed nurses. The course will introduce students to the disease process and aspects of caring for a long-term care resident with dementia. Individuals who successfully complete this course are eligible to apply to sit for the Indiana State Department of Health (ISDH) certification exam for nursing assistants. This course meets the minimum standards set forth by the ISDH for Certified Nursing Assistant (CNA) training and for health care workers in long-term care facilities.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Healthcare
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

Health Careers II

7164 - Certified Clinical Medical Assistant (CCMA)

The Certified Clinical Medical Assistant (CCMA) course will prepare students for the National Healthcare Association CCMA exam. Instruction includes taking and recording vital signs, preparing patients for examination, patient education, and assisting the physician during the exam. The collecting and preparation of laboratory specimens and basic laboratory testing will be covered. The course prepares students for the administration of medication, venipuncture, ECG, and wound care and provides a basic understanding of the clinical and administrative duties and responsibilities pertinent to medical offices. Instruction in medical correspondence and records, case histories of patients, filing, telephone procedures, appointment scheduling, receptionist duties, and processing mail is also included. Written, verbal, and nonverbal communications according to patient needs are covered as well as documentation and associated legal and ethical boundaries.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Healthcare; Medical Terminology
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Schools are strongly encouraged to offer the CCMA course along with Principles of Healthcare and Medical Terminology as part of a 3 period block of time

7255 - Healthcare Specialist Capstone

The Healthcare Specialist Capstone course will facilitate healthcare students' acquisition of additional knowledge and skills necessary to work in a variety of healthcare settings beyond a long term care facility including hospitals, doctors' offices, and clinics. Students can accomplish this goal by completing coursework that will cover topics such as Medical Law and Ethics, Electronic Health Records, and/or Behavioral Health. Schools may offer additional healthcare certifications such as the Certified Clinical Medical Assistant (CCMA) or Phlebotomy along with the coursework or in place of the coursework.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Healthcare; Medical Terminology; Healthcare Specialist: CNA, EMT or Certified Clinical Medical Assistant (CCMA)
- Recommended Prerequisites: None
- 2 semester course, 2 semester required, 1-3 credits per semester, 6 credits max
- Counts as a Directed Elective or Elective for all diplomas

7137 - Principles of Pharmacy Tech

Principles of Pharmacy Tech is an introduction to the principles of pharmacotherapy including basic pharmacology, medication management, and safety. Students will be introduced to various systems of the human body and the most important drugs affecting these systems. Students will develop an understanding of drug classes and their mechanism of action when prescribed for a particular disease state. This course will also introduce the essential mathematical concepts and skills needed for pharmacy practice. Students will be introduced to metric, avoirdupois, and apothecary systems of measurements. Other calculation methods that will be studied are ratio and proportion, dimensional analysis, and calculations for compounded products.

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: None
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

Robotics I

7220 - Principles of Industry 4.0 and Digital Manufacturing

Principles of Industry 4.0 introduces students to the Industrial Internet of Things (IIoT). Students will explore Industry 4.0 technologies such as artificial intelligence (AI), human-to-robot collaboration, big data, safety, electrical, sensors, digital integration, fluid power, robot operation, measurement, CAD, CNC, additive manufacturing, print reading, and technical mathematics. Students will complete hands-on labs, virtual simulations, projects, and critical thinking assignments to help prepare for SACA C-101 Certified Industry 4.0 Associate I - Basic Operations Certification Exam.

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: None
- Recommended Prerequisites: Introduction to Advanced Manufacturing
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

4728 - Robotics Design and Innovation

The Robotics Design and Innovation course introduces students to technological innovations that are revolutionizing modern manufacturing and logistic centers across global markets. Students will explore careers that are related to the fourth industrial revolution and be introduced to the emerging technologies that make the manufacturing world ever changing. These technologies include; mechatronics, CAD/CAM, robots, programmable automation, cloud technologies, networking, big data and analytics. Students will design a part to be mass-produced using processes such as additive and subtractive manufacturing, while utilizing lean manufacturing concepts. The course will prepare students for the SACA, C-102 Certified Industry 4.0 Associate

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Industry 4.0 - Smart Manufacturing
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Counts as a quantitative reasoning course

Veterinary Science I

7280 - Principles of Veterinary Science

Principles of Veterinary Science provides students with an overview of the small and large animal veterinary industry which includes companion, food, and exotic animals. Principles of Veterinary Science provides students with an overview of common veterinary careers, including: veterinary assistant, veterinary technician, and veterinarian. Students will learn the foundational knowledge necessary for a career working with either large or small animals. Students will also begin developing practical lab skills and an understanding of common veterinary office practices.

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: None
- Recommended Prerequisites: Introduction to Agriculture, Food, and Natural Resources
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

7281 - Veterinary Science

Veterinary Science provides students with opportunities to participate in a variety of activities including laboratory work. Students will explore concepts including: medical terminology, laboratory procedures, clinical examination procedures, and the principles of animal diseases. Students will be introduced to issues associated with working in a veterinary clinic, veterinary clinic management, and veterinary law and ethics.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Veterinary Science
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

5070 - Advanced Life Science, Animals

Advanced Life Science: Animals provides students with opportunities to participate in a variety of activities including laboratory work. Students will explore concepts related to history and trends in animal agriculture as related to animal welfare, husbandry, diseases and parasites, laws and practices relating to handling, housing, environmental impact, global sustainable practices of animal agriculture, genetics, breeding practices, biotechnology uses, and comparative knowledge of anatomy and physiology of animals used in animal agriculture.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Agriculture; or Principles of Veterinary Science
- Recommended Prerequisites: Introduction to Agriculture, Food and Natural Resources; Animal Science; Biology; Chemistry; Integrated Chemistry Physics
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Fulfills a science requirement for all diplomas
- Counts as a quantitative reasoning course
- Counts as an elective or directed elective for all diplomas

Veterinary Science II

7282 - Veterinary Science Capstone

The Veterinary Science Capstone builds upon the knowledge and skills developed in the animal and veterinary courses by developing advanced skills that students can apply to the field. As a capstone course, students should have the opportunity to apply their knowledge and use skills through an intensive work-based learning experience. Students should explore concepts related to pharmacy and pharmacology, medical math, animal nursing, radiology and ultrasound imaging, and surgical preparation and assisting.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Veterinary Science; Advanced Life Science: Animals; Veterinary Science
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a directed elective or elective for all diplomas

Welding I

7110 - Principles of Welding Technology

The Principles of Welding Technology course includes classroom and laboratory experiences that develop a variety of skills in oxy-fuel cutting and basic welding. This course is designed for individuals who intend to make a career as a Welder, Technician, Designer, Researcher, or Engineer. Emphasis is placed on safety at all times. OSHA standards and guidelines endorsed by the American Welding Society (AWS) are used. Instructional activities emphasize properties of metals, safety issues, blueprint reading, electrical principles, welding symbols, and mechanical drawing through projects and exercises that teach students how to weld and be prepared for postsecondary and career success.

- Recommended Grade(s): 9, 10, 11
- Required Prerequisites: None
- Recommended Prerequisites: Introduction to Advanced Manufacturing
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

7111 - Shielded Metal Arc Welding

Shielded Metal Arc Welding provides students with exposure to both the theory behind and the practical application of the Shielded Metal Arc Welding process. Covered theory will include basic electricity, power sources, electrode selection, and all aspects pertaining to equipment operation and maintenance. Laboratory welds will be performed in basic weld joints with a variety of electrodes in the flat, horizontal and vertical positions. Emphasis will be placed on developing the basic skills necessary to comply with AWS industry standards.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Welding Technology
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas

7101 - Gas Welding Processes

Gas Welding Processes is designed to cover the operation of Gas Metal Arc Welding (MIG) equipment. This will include all settings, adjustments and maintenance needed to weld with a wire feed system. Instruction on both short-arc and spray-arc transfer methods will be covered. Tee, lap, and open groove joints will be done in all positions with solid, flux core, and aluminum wire. Test plates will be made for progress evaluation. Schools may choose to offer the course as a comprehensive MIG Welding course or a combination of introductory MIG and TIG Welding operations.

- Recommended Grade(s): 10, 11, 12
- Required Prerequisites: Principles of Welding Technology
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1 credit per semester, 2 credits maximum
- Counts as a directed elective or elective for all diplomas
- Schools may choose to cover both introductory MIG and TIG Welding. This configuration is available for dual credit through ITCC

Welding II

7226 - Welding Technology Capstone

The Welding Technology Capstone course builds upon the knowledge and skills developed in Welding Fundamentals, Shielded Metal Arc Welding, and Gas Metal Arc Welding by developing advanced welding skills in Gas Tungsten Arc Welding (TIG), Pipe Welding, and Fabrication. As a capstone course, students should have the opportunity to apply their knowledge and use skills through an intensive work-based learning experience.

- Recommended Grade(s): 11, 12
- Required Prerequisites: Principles of Welding Technology; Shielded Metal Arc Welding; Gas Welding Processes
- Recommended Prerequisites: None
- 2 semester course, 2 semesters required, 1-3 credits per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for all diplomas

Nondiscrimination Policy:

The Wabash River Career & Technical Education District does not discriminate on the basis of race, color, national origin, sex, disability, or age and provides equal access to its educational services, programs, instruction, and facilities. The following person(s) has been designated to handle inquiries regarding the nondiscrimination policies:

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