CAREER & TECHNICAL EDUCATION INDIANA

HIGH SCHOOL
CAREER AND TECHNICAL EDUCATION
COURSE TITLES AND DESCRIPTIONS

2026-2027

INDIANA COMMISSION for HIGHER EDUCATION

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Questions regarding Indiana's secondary CTE courses can be directed to CTE@che.in.gov.
Please visit the CTE Programs of Study webpage to view additional resources.

Advanced Manufacturing

4796 Introduction to Advanced Manufacturing

INT ADV MFG

Introduction to Advanced Manufacturing and Logistics introduces students to the field of advanced manufacturing and logistics. The course explores the field's relationship to society, individuals, and the environment. Students learn to apply modern manufacturing processes in order to obtain resources and change them into industrial materials, industrial products, and consumer products. Students investigate the properties of engineered materials. Students study six major types of material processes: casting and molding, forming, separating, conditioning, finishing, and assembling. After gaining a working knowledge of these processes, students are introduced to the logistical and business principles utilized in today's advanced manufacturing industry. Students gain a basic understanding of tooling, electrical skills, operation skills, inventory principles, Material Safety Data Sheets (MSDS), chart and graph reading, and other Manufacturing Skill Standards Council (MSSC) concepts. There is also an emphasis placed on the flow process principles, material movement, safety, and related business operations. Students have the opportunity to develop the characteristics employers seek as well as skills that will help them in future endeavors.

4880 Advanced Manufacturing: Special Topics

ADV MFG ST

Advanced Manufacturing: Special Topics is an extended-learning experience designed to address the advancement and specialization of careers within the Advanced Manufacturing Career Cluster through the provision of a specialized course for a specific workforce need in the school's region. The learning experience takes place at a qualified site, and is designed to give the student the opportunity to learn and practice technical skills—while working under the direction of an appropriately-licensed professional. Throughout the course, students will focus on learning about employment opportunities and obtaining the knowledge, skills, and attitudes essential for success in specific occupations. Course standards and curriculum must be tailored to the specific profession. Course Standards must prepare students to advance in this career field and, where applicable, provide students with opportunities for certification or dual credit. Participation in a related CTSO is encouraged to aid in the development of leadership, communication, and other career-related skills.

6146 Advanced Career & Technical Education, College Credit: Advanced Manufacturing

ADV CTE CC AMFG

Advanced Career and Technical Education, College Credit is the course title covering any advanced CTE course offered for credit by an accredited postsecondary institution through an adjunct agreement with a secondary school. The intent of this course is to allow students to earn college credit for courses with content that goes beyond what is currently approved for high school

credit. This course may be used for any dual enrollment course, including a joint program of study involving a postsecondary partnership.

4788 Engineering and Technology: Special Topics

ENG TECH ST

Engineering and Technology: Special Topics is an extended learning experience designed to address the advancement and specialization of careers within the career cluster through the provision of a specialized course for a specific workforce need in the school's region. The learning experience is at a qualified site, and is designed to give the student the opportunity to learn and practice technical skills; while working under the direction of the appropriately licensed professional. Throughout the course, students will focus on learning about employment opportunities and obtaining the knowledge, skills and attitudes essential for success in specific occupations. Course standards and curriculum must be tailored to the specific profession, preparing students to advance in this career field, and where applicable, provide students with opportunities for certification or dual credit. Participation in a related CTSO encourages the development of leadership, communication and career-related skills, and opportunities for community service.

4794 Introduction to Design Processes

INT DES PRO

Introduction to Design Processes is a course that specializes in modern design and engineering processes with a focus on creative problem solving in developing, testing, communicating, and presenting post-evaluation of products. Students use the design process to analyze, research, and develop solutions to problems. This process gives a framework through which they design, manufacture, test, and present their ideas. Students will demonstrate and utilize design principles and elements for visual presentation. Designing aspects will also cover aesthetics, ergonomics, the environment, safety, and production. The design process is a core-learning tool for many courses enabling the student to solve problems in a systematic, logical and creative manner. Students develop a good understanding of the way the process helps them think creatively and develop aesthetic ideas. The design process encourages the students to engage in higher level thinking to create solutions for many types of problems.

7199 Engineering Essentials

ENG ESS

Engineering Essentials is designed as a first-exposure experience to inspire students of all backgrounds to explore the breadth of engineering-related career opportunities. Throughout the course, students explore global engineering challenges and sustainability goals, the impact of engineering, and the variety of career paths available to them. Students will understand the various disciplines within the engineering field, approach and solve problems in different ways, use a variety of industry tools, and build an engineering mindset.

NOTE: This course aligns with the PLTW Engineering Essentials curriculum. Use of the PLTW curriculum may require additional training and membership in the PLTW network.

Biotechnology

7340 Principles of Biotechnology

PRIN BIOTECH

Principles of Biotechnology presents an in-depth overview of biotechnology emphasizing basic molecular techniques of manipulating DNA; processes involved in protein purification and analysis; microbial, plant, aquatic, medical and animal biotechnology; regulations and ethics of the biotechnology industry.

7341 Biotech Manufacturing

BIOTECH MANF

Biotech Manufacturing introduces students to the basics of design and manufacturing within the biotechnology industry, gaining an understanding of the work environment. Students will learn a brief history of the U.S. Food and Drug Administration (FDA), then will learn how the practices set-forth by the FDA control the work environment and the behavior of workers in the field. This course prepares students for the most basic entry-level positions in this regulated industry.

7342 Biotech Regulatory Affairs

BIOTECH REG AFF

Biotech Regulatory Affairs provides an entry-level introduction to the laws and regulations that govern the development, marketing, and commercial distribution of drugs as well as biological and medical devices. Students will also discuss how laws and regulations influence the pharmaceutical, biotechnology, and medical device industry as a whole. The goal of the course is to provide students with a greater understanding of how to interact with the U.S. Food and Drug Administration (FDA) and other global regulatory agencies.

7343 Advanced Biotech Manufacturing

ADV BIOTECH MANF

Advanced Biotech Manufacturing will introduce students to the key industrial technology knowledge and skills required in the manufacturing of pharmaceuticals and/or medical devices. Students will learn the basics of fluid power and metrology. Students will apply these skills through lecture, lab, and simulations.

7344 Biotechnology Capstone

BIOTECH CAP

The Biotechnology Capstone focuses on safety, quality, and manufacturing practices for Biotechnical manufacturing careers. The course can be customized to provide a focus on pharmaceutical manufacturing. Capstone content can be combined with outside experiences and credits can be applied to the Medical Device Quality CT, Biopharmaceutical Manufacturing CT and the Biotechnology AAS (the degree requires Biology, but not the chemistry) at Ivy Tech. Students should have completed a college level Biology or Chemistry course prior to enrolling in the capstone course.

Design Technology

7196 Mechanical and Architectural Design

ARCT DES

Mechanical and Architectural Design provides students with a basic understanding of creating working drawings related to manufacturing detailing and assembly as well as a survey of Architectural design focused on the creative design of buildings. Topics include fastening devices, thread symbols and nomenclature, surface texture symbols, classes of fits, and the use of parts lists, title blocks and revision blocks. From an Architecture perspective, this course covers problems of site analysis, facilities programming, space planning, conceptual design, proper use of materials, and selection of structure and construction techniques.

7202 Manufacturing Principles and Design

PRIN DES TECH

Manufacturing Principles and Design challenges students to use 2D and 3D CAD skills to explore topics related to manufacturing principles and design. Students will gain an understanding of solid modeling and parametric solid modeling and use 3D printers to create industry part prints. Additionally, students will compare manufacturing practices like Lean Manufacturing, design and program CNC processes, and use metrology tools and practices to evaluate an object.

7223 Mechanical Design Capstone

MECH DES CAP

The Mechanical Design Capstone covers a broad range of design techniques that are critical for the Manufacturing industry. Students will have the chance to study solid modeling techniques and design, fundamental principles of geometric dimensioning and tolerancing, Solidworks design software, and an introduction to additive manufacturing.

7197 BIM Architecture

BIM ARCH

BIM Architecture introduces students to Building Information Modeling (BIM) which is an intelligent 3D model-based process that gives architecture, engineering, and construction professionals the insight and tools to better plan, design, and construct buildings. Students will deepen their skills in 3D CAD and learn to use BIM software to capture and analyze concepts and to prepare client presentations for Commercial Construction.

7225 Architectural Design Capstone

ARCH DES CAP

The Architectural Design Capstone covers residential design and drafting. Topics include interior space planning, structural design and development of working drawings. The course provides an opportunity for students to design a residence using accepted building standards and introduces various construction materials. Students will also learn advanced CAD design topics in architectural design. Completion of the entire course may also provide students the opportunity to understand basic surveying equipment and surveying techniques.

Electronics and Computer Technology

7361 Electronic Fundamentals

ELEC FUND

In Electronic Fundamentals, students will concentrate on the physical world of electricity and electronics. Practical techniques for proper and safe use of basic hand and machine tools are introduced. Techniques for connecting various types of circuits are also covered. The process of fabricating printed circuit boards is presented.

7362 Electronics and Computer Technology Capstone

ECT CAP

Electronics and Computer Technology Capstone provides the opportunity for students to dig deeper into foundational electronic concepts including circuit analysis and digital electronics modules. This course incorporates classroom, laboratory, and work-based learning experiences in the fundamental electronics concepts of circuit analysis and digital electronics as well as optional modules focused on industrial technology, emerging electronic technologies, residential and commercial electronic communication, and automation. Industry certifications and additional postsecondary education are critical components of this pathway.

7098 Semiconductor Fabrication Capstone

SEMI FAB CAP

The semiconductor fabrication capstone provides students with an opportunity to delve into the burgeoning semiconductor manufacturing industry. Students will be challenged to identify, understand, and apply core concepts to semiconductor manufacturing. Topics such as microelectromechanical systems and vacuum technology in manufacturing will be discussed. Emphasis will also be placed on specific operating and safety procedures which the fabrication of semiconductors requires.

Engineering

4802 Introduction to Engineering Design

INT ENG DES

Introduction to Engineering Design is a fundamental pre-engineering course where students become familiar with the engineering design process. Students work both individually and in teams to design solutions to a variety of problems using industry standard sketches and current 3D design and modeling software to represent and communicate solutions. Students apply their knowledge through hands-on projects and document their work with the use of an engineering notebook. Students begin with completing structured activities and move to solving open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills. Ethical issues related to professional practice and product development are also presented.

NOTE: This course aligns with the PLTW Introduction to Engineering Design curriculum. Use of the PLTW curriculum may require additional training and membership in the PLTW network.

5644 Principles of Engineering

PRNC ENG

Principles of Engineering is a course that focuses on the process of applying engineering, technological, scientific, and mathematical principles in the design, production, and operation of products, structures, and systems. This is a hands-on course designed to provide students interested in engineering careers to explore experiences related to specialized fields such as civil, mechanical, and materials engineering. Students will engage in research, development, planning, design, production, and project management to simulate a career in engineering. The topics of ethics and the impacts of engineering decisions are also addressed. Classroom activities are organized to allow students to work in teams and use modern technological processes, computers, CAD software, and production systems in developing and presenting solutions to engineering problems. Schools may use the PLTW curriculum to meet the standards for this course.

NOTE: This course aligns with the PLTW Principles of Engineering curriculum. Use of the PLTW curriculum may require additional training and membership in the PLTW network.

5518 Aerospace Engineering

AERO ENG

Aerospace Engineering should provide students with the fundamental knowledge and experience to apply mathematical, scientific, and engineering principles to the design, development, and evolution of aircraft, space vehicles and their operating systems. Emphasis should include investigation and research on flight characteristics, analysis of aerodynamic design, and impact of this technology on the environment. Classroom instruction should provide creative thinking and problem-solving activities using software that allows students to design, test, and evaluate a variety of air and space vehicles, their systems, and launching, guidance and control procedures.

NOTE: This course aligns with the PLTW Aerospace Engineering curriculum. Use of the PLTW curriculum may require additional training and membership in the PLTW network.

5650 Civil Engineering and Architecture

CIVIL ENG

Civil Engineering and Architecture introduces students to the fundamental design and development aspects of civil engineering and architectural planning activities. Application and design principles will be used in conjunction with mathematical and scientific knowledge. Computer software programs should allow students opportunities to design, simulate, and evaluate the construction of buildings and communities. Emphasis should be placed on learning ways that environmental factors might influence the planning and design of a project. Activities should include the preparation of cost estimates as well as a review of regulatory procedures that would affect the project design.

NOTE: This course aligns with the PLTW Civil Engineering and Architecture curriculum. Use of the PLTW Curriculum may require additional training and membership in the PLTW network.

5534 Computer Integrated Manufacturing

COMP INT MFG

Computer Integrated Manufacturing is a course that applies principles of rapid prototyping, robotics, and automation. This course builds upon the computer solid modeling skills developed in Introduction of Engineering Design. Students will use computer controlled rapid prototyping and CNC equipment to solve problems by constructing actual models of their three-dimensional designs. Students will also be introduced to the fundamentals of robotics and how this equipment is used in an automated manufacturing environment. Students will evaluate their design solutions using various techniques of analysis and make appropriate modifications before producing their prototypes.

NOTE: This course aligns with the PLTW Computer Integrated Manufacturing curriculum. Use of the PLTW curriculum may require additional training and membership in the PLTW network.

5538 Digital Electronics

DIG ELEC

Digital Electronics is a course of study in applied digital logic that encompasses the design and application of electronic circuits and devices found in video games, watches, calculators, digital cameras, and thousands of other devices. Instruction includes the application of engineering and scientific principles as well as the use of Boolean algebra to solve design problems. Using computer software that reflects current industry standards, activities should provide opportunities for students to design, construct, test, and analyze simple and complex digital circuitry software will be used to develop and evaluate the product design. This course engages students in critical thinking and problem-solving skills, time management and teamwork skills.

NOTE: This course aligns with the PLTW Digital Electronics curriculum. Use of the PLTW curriculum may require additional training and membership in the PLTW network.

4818 Environmental Sustainability

ENV SUS

Environmental Sustainability is a specialization course that builds upon prior knowledge learned in previous engineering and science courses. Students investigate and design solutions in response to current challenges such as providing the world with clean and abundant drinking water, an adequate food supply, and renewable energy. Students are introduced to environmental issues and use the engineering design process to design, build, and test potential solutions. This course engages critical thinking and problem-solving skills as students apply and extend their knowledge through designing experiments, managing projects, conducting research, and creating presentations to communicate solutions.

5698 Engineering Design and Development

ENG DES DEV

Engineering Design and Development (EDD) is an engineering research course in which students work in teams to research, design, test, and construct a solution to an open-ended engineering problem. The product development life cycle and a design process are used to guide the team to reach a solution to the problem. The team and/or individual(s)communicates their solution to a panel of stakeholders at the conclusion of the course. As a capstone course in the Engineering Pathway, EDD engages students in critical thinking, problem-solving, time management, and teamwork skills.

NOTE: This course aligns with the PLTW Engineering Design and Development curriculum. Use of the PLTW curriculum may require additional training and membership in the PLTW network.

Industry 4.0 - Smart Manufacturing

7220 Principles of Industry 4.0 and Digital Manufacturing

PRIN DIG MFG

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.

4728 Robotics Design and Innovation

ROB DES INOV

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 will 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, and big data analytics. Students will design a part to be mass-produced using a process 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.

7100 Smart Manufacturing Systems

SMRT MFG SYS

Smart Manufacturing Systems focuses on the electrical system that supports the Industry 4.0 manufacturing system and building on skills learned in Principles of Industry 4.0 and Robotics Design and Innovation. Topics include Industry 4.0 technologies such as data analytics, cyber security, and smart sensors. Basic theory, operation, and programming of Programmable Logic Controllers (PLC) will be emphasized in this course along with how automation devices may be integrated with other machines. Students will work on a 4-6 student team to build a working prototype of an Industry 4.0 system. Highlights include: variable-frequency drives, Programming Logic Controller (PLC) troubleshooting, cyber security, smart sensors, and smart network communications.

7222 Industry 4.0 - Smart Manufacturing Capstone

SMRT MFG CAP

Industry 4.0 - Smart Manufacturing Capstone introduces the basic theory, operation, and programming of industrial robots and their applications through simulations and hands-on laboratory activities. Multiple industry standard certifications in the field of robotics and automation will be available depending on the length of the course. As a capstone course, students are encouraged to participate in an intensive, embedded work-based learning experience.

7108 Principles of Advanced Manufacturing

PRIN ADV MFG

Principles of Advanced Manufacturing includes classroom and laboratory experiences, which are focused on industrial technology and manufacturing trends. Covered topics include safety and impact, manufacturing essentials, lean manufacturing, design principles, and careers in advanced manufacturing. Students participate in hands-on projects and team activities to learn necessary skills while using the latest industry technologies. Work-Based Learning experiences and industry partnerships are highly encouraged for an authentic industry experience.

7103 Advanced Manufacturing Technology

ADV MFG TECH

Advanced Manufacturing Technology introduces students to a variety of manufacturing processes and procedures that are used in real-world manufacturing environments. The course covers key electrical principles—including current, voltage, resistance, power, inductance, capacitance, and transformers—as well as the basic principles of mechanical and fluid power. Additional course topics include, types of production, production materials, machining and tooling, manufacturing planning, production control, and product distribution. Students will be expected to understand the product life cycle from conception through distribution. This course also focuses on technologies used in production processes such as basic power systems, energy transfer systems, and machine operation. The course utilizes a combination of lecture, lab, online simulation, and programming to prepare students for Certified Production Technician Testing through Manufacturing Skill Standards Council (MSSC).

Industrial Automation and Robotics

7106 Mechatronics Systems

MECH SYS

Mechatronics Systems covers the basic electrical and mechanical components and functions of a complex mechatronics system. Through a systems-based approach, students learn about the mechanical components that lead and support the flow of energy through a mechanical system.

Emphasis is placed on the development of strategies for increasing efficiency and reducing wear and tear. After gaining an understanding of the complete system, students learn and apply troubleshooting strategies to identify, localize, and (where possible) correct malfunctions. Preventive maintenance of mechanical elements and electrical drives as well as safety issues within the system are also discussed.

7224 Industrial Automation and Robotics Capstone

IND ROB CAP

The Industrial Automation and Robotics Capstone focuses on the installation, maintenance, and repair of industrial robots. Students will also learn the basics of pneumatic, electro-pneumatic and hydraulic control circuits as well as the basic theory, fundamentals of digital logic, and programming of programmable logic controllers (PLCs) in a complex mechatronic system. Students will learn to identify malfunctioning robots and to apply troubleshooting strategies to identify and localize problems caused by pneumatic and hydraulic control circuits and PLC hardware. Completing the capstone course will provide students the opportunity to earn a postsecondary certificate and will prepare students to take nationally recognized industry certification exams. Hands-on projects and team activities will allow students to apply learning on the latest industry technologies. Extended work-based learning experiences and industry partnerships are highly encouraged for an authentic industry experience.

Industrial Technical Maintenance - Electrical

7102 Industrial Electrical Fundamentals

IND ELEC FUND

The Industrial Electrical Fundamentals course will introduce students to the National Electric Code and its application in designing and installing electrical circuits, selecting wiring materials and devices, and choosing wiring methods. Students will also gain a general understanding of common types of electric motors.

7260 Industrial Electrical Capstone

IND ELEC CAP

The Industrial Electrical Capstone is designed to provide an understanding of circuits using alternating current and the motor operation as well as the operation and programming of programmable logic controllers (PLC). The course will also examine the electrical components in a complex mechatronic system. This course will give each student a general understanding of common types of electric motors, extending from the small shaded pole fan motors to the large three-phase motors. This course will use lectures, labs, online simulations and programming to prepare students for the C-207 Programmable Controller Systems 1 Certification through Smart Automation Certification Alliance (SACA).

Industrial Technical Maintenance - Mechanical

7104 Industrial Maintenance Fundamentals

IND MAINT FUN

Industrial Maintenance Fundamentals introduces students to fundamental Welding and Machining skills. Students will be introduced to basic skills in welding, cutting and brazing, and machine tooling that are applicable in a wide variety of trade professions. Specifically, students will learn safe practices in oxy-fuel and Arc welding processes along with experience in using turning, milling, and grinding applications.

7261 Industrial Maintenance Capstone

IND MAINT CAP

The Industrial Maintenance Capstone examines the procedures for the removal, repair, and installation of machine components. The methods of installation, lubrication practices, and maintenance procedures for industrial machinery are analyzed. Additionally the course may cover the mechanical components and electrical drives in a complex mechatronic system. By understanding the inner workings of the complete system, students will learn and apply troubleshooting strategies to identify, localize and (where possible) to correct malfunctions. Preventive maintenance of mechanical elements and electrical drives as well as safety issues within the system will be discussed. This course will use lecture, lab, online simulation and programming to prepare students for C-210 Mechanical Power Systems I Certification through Smart Automation Certification Alliance (SACA).

Precision Machining

7109 Principles of Precision Machining

PRIN PREC MACH

Principles of Precision Machining provides students with a basic understanding of the processes used to produce industrial goods. Classroom instruction and labs will focus on shop safety, measurement, layout, blueprint reading, shop math, metallurgy, the use of basic hand tools, milling, turning, grinding, and sawing operations. This course prepares the student for the optional National Institute for Metalworking Skills (NIMS) Measurement, Materials, & Safety Certification, which may be required for college dual credit.

7105 Precision Machining Fundamentals

MACH FUN

Precision Machining Fundamentals will build a foundation in conventional milling and turning. Students will be instructed in the classroom on topics of shop safety, theory, industrial

terminology, and calculations. Lab work will consist of the setup and operation of vertical and/or horizontal milling machines and engine lathes. This course prepares the student for the optional National Institute for Metalworking Skills (NIMS) Milling I Certification, which may be required for college dual credit.

7107 Advanced Precision Machining

PREC MACH

Advanced Precision Machining builds upon the Turning and Milling processes learned in Precision Machining Fundamentals and builds a foundation in abrasive-process machines. Students will be instructed in the classroom on topics of shop safety, theory, industrial terminology, and calculations associated with abrasives. Lab work will consist of the setup and operation of bench grinders and surface grinders. Additionally students will be introduced to Computerized Numeric Controlled (CNC) setup, operations and programming. This course prepares the student for the optional National Institute for Metalworking Skills (NIMS) Grinding I Certification, which may be required for college dual credit.

7219 Precision Machining Capstone

PREC MACH CAP

The Precision Machining Capstone is an in-depth study of skills learned in Precision Machining I, with a stronger focus on CNC setup/operation/programming. Students will be introduced to two axis CNC lathe programming and three axis CNC milling machine programming. Develops the theory of programming in the classroom with applications of the program accomplished on industry-type machines. Studies terminology of coordinates, cutter paths, angle cutting, and linear and circular interpolation. Classroom activities will concentrate on precision set-up and inspection work, as well as machine shop calculations. Students will develop skills in advanced machining and measuring parts involving tighter tolerances and more complex geometry. Throughout the course there will be a continued focus on workplace safety.

Welding Technology

7110 Principles of Welding Technology

PRIN WELD TECH

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.

7111 Shielded Metal Arc Welding

SHLD MAW

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.

7101 Gas Welding Processes

GAS WELD PROC

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, fluxcore, 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.

7226 Welding Technology Capstone

WELD TECH CAP

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.

Agriculture

5056 Introduction to Agriculture, Food, and Natural Resources

INT AFNR

Introduction to Agriculture, Food, and Natural Resources is a one or two semester course that is highly recommended as a prerequisite to and as a foundation for all other agricultural classes. Through hands-on learning activities, students are encouraged to investigate areas of agriculture. Students are introduced to the following areas of agriculture: animal science, plant and soil science, food science, horticultural science, agricultural business management, natural resources, agriculture power, structure, and technology, careers in agriculture, leadership, and supervised agricultural experience. An activity- and project-based approach is used along with team building to enhance the effectiveness of the student-learning activities.

5228 Supervised Agricultural Experience (SAE)

SAE

The Supervised Agricultural Experience (SAE) is designed to provide students with opportunities to gain experience in the agricultural field(s) in which they are interested. Students will apply knowledge learned in the classroom, laboratory, and other training sites to real-life situations with a standards-based learning plan. Students work closely with their agriculture teacher(s), parents, and/or employers to get the most out of their SAE program. This course can be offered each year as well as during the summer session. Curriculum content and competencies need to be varied so that school year and summer session experiences are not duplicative.

6130 Advanced Career & Technical Education, College Credit: Agriculture

ADV CTE CC AG

Advanced Career and Technical Education, College Credit is a course title covering any CTE advanced course offered for credit by an accredited post-secondary institution through an adjunct agreement with a secondary school. The intent of this course is to allow students to earn college credit for courses with content that goes beyond that currently approved for high school credit. This course may be used for any dual enrollment course, including a joint program of study involving a postsecondary partnership.

6150 Agriculture: Special Topics

AG ST

Agriculture: Special Topics is an extended-learning experience designed to address the advancement and specialization of careers within a specific career cluster through the provision of a specialized course for a specific workforce need in the school's region. The learning experience is at a qualified site, and is designed to give the student the opportunity to learn and practice

technical skills; while working under the direction of the appropriately licensed professional. Throughout the course, students will focus on learning about employment opportunities and obtaining the knowledge, skills and attitudes essential for success in specific occupations. Course standards and curriculum must be tailored to the specific profession, preparing students to advance in this career field, and where applicable, provide students with opportunities for certification or dual credit. Participation in a related CTSO encourages the development of leadership, communication and career related skills, and opportunities for community service.

7117 Principles of Agriculture

PRIN AG

Principles of Agriculture exposes students to the diversity of career options found within the agricultural industry and to other agribusiness concepts. Students will develop an understanding of the role of agriculture in the United States and globally. Students will explore Agriculture, Food, and Natural Resource (AFNR) systems related to the production of food, fiber and fuel and the associated health, safety and environmental management systems. Topics covered in the course range from animals, plants, food, natural resources, ag power, structures and technology, and agribusiness. Participation in FFA and Supervised Agricultural Experiences (SAE) will be an integral part of this course in order to develop leadership and career ready skills.

7262 Agricultural Research Capstone

AG RES CAP

The Agricultural Research Capstone includes extended laboratory, field, and literature investigations in one or more specialized agricultural science disciplines, such as animal, plant, food, natural resources, biotechnology, engineering, etc. Students enrolled in this course will apply scientific applications, concepts, principles, and design process to solve complex, real-world issues in agriculture. Students will become familiar with laboratory procedures used in an educational, research, or industrial setting. Students will complete an end-of-course project and presentation, such as a scientific research paper, agriscience fair project, or some other suitable presentation of their findings. This course can be used as a capstone experience for any agriculture pathway.

7238 Agribusiness Capstone

AG BUS CAP

The Agribusiness Management Capstone introduces students to the principles of agribusiness management and leadership from a local and global perspective, with the utilization of technology. The course will help students build a strong knowledge base of the agribusiness industry as they study agribusiness types, communications, agricultural law, leadership, and teamwork, ethics, and agricultural economics. Additionally, students will understand the role of selling in the agricultural economy, stressing the points and terminology necessary in today's agriculture. Students will demonstrate principles and techniques for planning, development, application and

management of agribusiness systems through project-based learning and a supervised agriculture experience (work-based learning) programs. This course can be used as a capstone experience for any agriculture pathway.

7230 Agriculture Biotechnology Capstone

AG BIO CAP

The Ag Biotechnology Capstone concentrates on the applications of biotechnology in the agricultural industry. Students enrolled in this course will apply the use of living organisms to solve problems or make useful products. Students will become familiar with laboratory procedures such as cell/tissue culture, micropropagation, electrophoresis, etc. Students enrolled in this course will be required to use data and scientific techniques to solve problems concerning living organisms and will demonstrate competence in the application of principles and techniques for the development, application and management of biotechnology within the agriculture industry. As a capstone course, students should have the opportunity to apply their knowledge and use skills through an intensive work-based learning experience.

Ag Mechanical and Engineering

5088 Agriculture Power, Structure, and Technology

AG POW

Agriculture Power, Structure and Technology is a lab-intensive course in which students develop an understanding of the basic principles of tool selection, operation, maintenance, and management of agricultural equipment in concert with the utilization of technology. Topics covered include: safety, problem-solving/troubleshooting, electricity, plumbing, concrete, carpentry, metal technology, engines, emerging technologies, leadership development, supervised agricultural experience, and career opportunities in the area of agriculture power, structure, and technology.

7112 Agriculture Structures: Fabrication and Design

AG ST FAB DES

Agricultural Structures: Fabrication and Design focuses on metal work and agricultural structures. This course allows students to develop skills in welding and metalworking, construction, fabrication, machine components and design while incorporating the engineering design process. Students will also cover safety topics for each area while demonstrating appropriate health and safety standards.

7228 Agriculture Mechanization and Technology Capstone

AG MECH CAP

The Agriculture Mechanization and Technology Capstone builds upon the knowledge and skills developed in the Principles, Ag Power, Structures and Technology, Agricultural Structures Fabrication and Design courses by developing advanced skills that students can apply to the field. Students enrolled in this course will participate in lab activities involving agricultural equipment such as fueled power engines, electrical motors, pneumatic and hydraulic systems, etc. Students will be instructed on the operation, maintenance, repair, engineering and design of the agricultural mechanics and technology systems. As a capstone course, students should have the opportunity to apply their knowledge and use skills through an intensive work-based learning experience.

Agriscience – Plants or Animals

5008 Animal Science

ANML SCI

Animal Science provides students with an overview of the animal agriculture industry. Students participate in a variety of activities and laboratory work including real and simulated animal science experiences and projects. All areas that the students study may be applied to both large and small animals. Topics to be covered in the course include: history and trends in animal agriculture, laws and practices relating to animal agriculture, comparative anatomy and physiology of animals, biosecurity threats and interventions relating to animal and human safety, nutrition, reproduction, careers, leadership, and supervised agricultural experiences relating to animal agriculture.

5170 Plant and Soil Science

PLT SL SCI

Plant and Soil Science a two semester course that provides students with opportunities to participate in a variety of activities including laboratory and field work. Coursework includes hands-on learning activities that encourage students to investigate areas of plant and soil science. Students are introduced to the following areas of plant and soil science: plant growth, reproduction and propagation, photosynthesis and respiration, diseases and pests of plants and their management, biotechnology, the basic components and types of soil, soil tillage, and conservation.

5074 Advanced Life Science: Plants and Soils

ALS PLT/SL

Advanced Life Science: Plants and Soils provides students with opportunities to participate in a variety of activities including laboratory work. Students study concepts, principles, and theories

associated with plants and soils. Knowledge gained enables them to better understand the workings of agricultural and horticultural practices. They recognize how plants are classified, grow, function, and reproduce. Students explore plant genetics and the use of plants by humans. They examine plant evolution and the role of plants in ecology. Students investigate, through laboratories and fieldwork, how plants function and how soil influences plant life.

5072 Advanced Life Science: Foods

ALS FOODS

Advanced Life Science: Foods provides students with opportunities to participate in a variety of activities including laboratory work. This is a standards-based, interdisciplinary science course that integrates biology, chemistry, and microbiology in the context of foods and the global food industry. Students enrolled in this course formulate, design, and carry out food-base laboratory and field investigations as an essential course component. Students understand how biology, chemistry, and physics principles apply to the composition of foods, the nutrition of foods, food and food product development, food processing, food safety and sanitation, food packaging, and food storage. Students completing this course will be able to apply the principles of scientific inquiry to solve problems related to biology, physics, and chemistry in the context of highly advanced industry applications of foods.

5070 Advanced Life Science: Animals

ALS ANIML

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.

5102 Food Science

FOOD SCI

Food Science provides students with an overview of food science and the role it plays in the securing of a safe, nutritious, and adequate food supply. A project-based approach is utilized in this course, along with laboratory, team building, and problem solving activities to enhance student learning. Students are introduced to the following areas of food science: food processing, food chemistry and physics, nutrition, food microbiology, preservation, packaging and labeling, food commodities, food regulations, issues, and careers in the food science industry.

Horticulture

5132 Horticultural Science

HORT SCI

Horticulture Science provides students with a background in the field of horticulture. Coursework includes hands-on activities that encourage students to investigate areas of horticulture as it relates to the biology and technology involved in the production, processing, and marketing of horticultural plants and products. Students are introduced to the following areas of horticulture science: reproduction and propagation of plants, plant growth, growth-media, management practices for field and greenhouse production, marketing concepts, production of plants of local interest, greenhouse management, floral design, and pest management. Students participate in a variety of activities including extensive laboratory work usually in a school greenhouse.

7114 Greenhouse and Soilless Production

GRN S PROD

Greenhouse and Soilless Production provides an overview of structural designs and uses of enclosed structures (greenhouses) to grow various plants and food. The course will focus on discussing different types of enclosed structures, management systems, and growing systems used to produce plants and food. The course will also present an overview of soilless growing systems such as hydroponics, aquaponics, aeroponics and fogponics. Students will utilize the school greenhouse as part of this course.

7232 Horticulture Capstone

HORT CAP

The Horticulture Capstone builds upon the knowledge and skills developed in the Principles, Horticultural Science, and Greenhouse and Soilless Production 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.

Landscaping

7115 Landscape and Turf Management

LAND TUR MAN

Landscape and Turf Management provides students with an overview of the many career opportunities in the diverse field of landscape and turf management. Students are introduced to the procedures used in the planning and design of a landscape using current technology practices, the principles and procedures involved with landscape construction, the determination of maintenance schedules, communications, and management skills necessary in landscaping

operations, and the care and use of equipment utilized by landscapers. Upon completion of the program, students have the opportunity to become Indiana Landscape Industry Certified through a state approved program.

7234 Landscape Management Capstone

LANDSC MGMT CAP

The Landscape Capstone course builds upon the knowledge and skills developed in the Principles, Horticultural Science and Landscape and Turf Management 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.

Precision Agriculture

7116 Precision Agriculture

PREC AG

Precision Agriculture describes the purpose and concepts of precision agriculture and precision farming through classroom and lab-based instruction. It involves understanding and operation of the various precision agriculture tools including GPS, GIS, and VRT. Students will learn how to collect data, analyze data and use the information to make decisions. Students will gain an understanding of the justifications that demonstrate the economic and environmental benefits of precision agriculture. The Precision Agriculture course also incorporates the use of UAVs. Students will demonstrate UAV competency and handling in order to achieve the Part 107 UAS certification.

7113 Crop Management

CROP MAN

Crop Management will provide an understanding of plant nutrient requirements and how to provide for those needs to achieve efficient crop production through classroom and lab-based instruction. Students will understand proper fertilizer materials, application methods and techniques. Instruction on soil analysis by demonstrating proper soil testing techniques which will be used to create fertility plans for proposed crops. Integrated pest management and the evaluation of various pest controls with minimal impact on the environment will also be an emphasis of the course.

7236 Precision Agriculture Capstone

PREC AG CAP

The Precision Agriculture Capstone builds upon the knowledge and skills developed in the Principles, Precision Agriculture and Crop Management 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.

Veterinary Science

7280 Principles of Veterinary Science

PRIN VET SCI

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.

7281 Veterinary Science

VET SCI

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.

7282 Veterinary Science Capstone

VET SCI CAP

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.

Water Systems

7381 Principles of Public Water Systems

PRIN WATER SYS

Principles of Public Water Systems provides students with an understanding of the implementation and management of water systems at the local, state, and federal levels. Students learn about the

economic and environmental factors associated with operating a public water distribution system, including the rules, regulations and safety requirements therein.

7382 Water Systems Fundamentals

WATER SYS FUND

Water Systems Fundamentals provides an overview of water distribution systems, specialized treatment processes, disinfection procedures, and general water system maintenance. Additional topics covered include organizational management, regulatory compliance, health and safety programs, and personal and professional skills.

7383 Advanced Water Systems

ADV WATER SYS

Advanced Water Systems focuses on the practical application of concepts learned in previous courses and preparation for the certification exam. Additionally, students will study the National Incident Management System (NIMS), which helps to ensure that all organizations work together to prevent, protect against, mitigate, respond to, and recover from the effects of incidents impacting the water supply.

7384 Water Systems Capstone

WATER SYS CAP

The Water Systems Capstone focuses on higher-level concepts that operators may be exposed to as they advance in their chosen careers. Course topics may include asset management, risk assessment and emergency response training, instrumentation (SCADA & GIS), water audits, construction inspection, and/or water plant administration.

Arts, Entertainment, & Design

4576 Arts, Entertainment, & Design: Special Topics

AED ST

Arts, Entertainment, & Design: Special Topics is an extended learning experience designed to address the advancement and specialization of careers within the career cluster through the provision of a specialized course for a specific workforce need in the school's region. The learning experience is at a qualified site, and is designed to give the student the opportunity to learn and practice technical skills; while working under the direction of the appropriately licensed professional. Throughout the course, students will focus on learning about employment opportunities and obtaining the knowledge, skills and attitudes essential for success in specific occupations. Course standards and curriculum must be tailored to the specific profession, preparing students to advance in this career field, and where applicable, provide students with opportunities for certification or dual credit. Participation in a related CTSO encourages the development of leadership, communication and career related skills, and opportunities for community service.

4834 Design Fundamentals

DES FUND

Design Fundamentals 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 in the area of communication technology. Student learning experiences encompass art history, art criticism, aesthetics, and production, which lead to the creation of portfolio-quality works. Students reflect upon and refine their work; explore cultural and historical connections; analyze, interpret, theorize, and make informed judgments about artwork and the nature of art in areas of communication; relate art to other disciplines and discover opportunities for integration; and incorporate literacy and presentational skills.

4790 Introduction to Communications

INT COMM

Introduction to Communications is a course designed to provide a foundational knowledge of identifying and using modern communication to exchange messages and information. This course explores the application of the tools, materials, and techniques used to design, produce, use, and assess systems of communication. Students will produce graphic and electronic media as they apply communication technologies. This course will also explore the various technical processes used to link ideas and people through the use of electronic and graphic media. Major goals of this course include an overview of communication technology; the way it has evolved, how messages are designed and produced, and how people may profit from creating information services and products. Students will explore mass media communication processes including radio and television broadcasting, publishing and printing activities, telecommunication networks, recording

services, computer and data processing networks, and other related systems. Students will use the design process to solve design projects in each communication area.

6134 Advanced Career & Technical Education, College Credit: Arts, Entertainment, and Design

ADV CTE CC AED

Advanced Career and Technical Education, College Credit is a course title covering any CTE advanced course offered for credit by an accredited postsecondary institution through an adjunct agreement with a secondary school. The intent of this course is to allow students to earn college credit for courses with content that goes beyond that currently approved for high school credit. This course may be used for any dual enrollment course, including a joint program of study involving a postsecondary partnership.

Digital Design

7140 Principles of Digital Design

PRIN DIG DES

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.

7141 Digital Design Graphics

DIG DES GRAPH

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.

5550 Graphic Design and Layout

GRAPH DES LT

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.

7138 Interactive Media Design

IN MED DES

Interactive Media Design focuses on the tools, strategies, and techniques for interactive design and emerging technologies, like web and social media. Students will learn the basics of planning, shooting, editing and post-producing video and sound. Additionally, students will explore the process of integrating text, graphics, audio and video for effective communication of information.

7136 Professional Photography & Videography

PRO PHOTO/VID

Professional Photography & Videography further develops advanced camera skills and photographic vision. The course introduces special techniques and digital processes while refining printing and processing skills. It will also emphasize good composition and the use of photography as a communication tool. Students will also learn the basics of planning, shooting, editing and post-producing video and sound.

7246 Digital Design Capstone

DIG DES CAP

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.

Fashion and Textiles

7301 Principles of Fashion and Textiles

PRIN FASH TEXT

Principles of Fashion and Textiles prepares students for occupations and higher education programs of study related to the entire spectrum of careers in the fashion industry. This course builds a foundation that prepares students for all aspects of the fashion creation process. Major topics include basic clothing construction techniques, pattern alterations, and use of commercial patterns.

7302 Textiles, Apparel, and Merchandising

TEXT APP MERCH

Textiles, Apparel, and Merchandising provides a comprehensive overview of the textiles, apparel and merchandising industry specific to fashion related goods including the nature of fashion, raw materials and production, designers, retailers, and supporting services.

7303 Advanced Textiles

ADV TEXT

Advanced Textiles will focus on the study of textiles concerning fiber, yarn, fabric construction, and finishes which affect the selection, use, and care of textiles.

7304 Fashion and Textiles Capstone

FASH TEXT CAP

Fashion Textile Capstone studies the evolution of Western dress from ancient times to the twentieth century. Emphasis on representative style and change over time. Additionally, this course will focus on the Identification of physical features which affect apparel quality. Analysis of ready-to-wear apparel to identify features which produce desirable aesthetic and functional performance is also covered.

Interior Design

7132 Principles of Interior Design

PRIN INT DES

Principles of Interior Design introduces students to fundamental design theory and color dynamics as applied to compositional design. Investigations into design theory and color dynamics will provide experiences in applying design theory to three-dimensional concepts, human factors and the psychology and social influences of space. These experiences will develop student's skills in creative problem solving, peer evaluation, and presentation skills.

7127 Interior Design Fundamentals

INT DES FUN

Interior Design Fundamentals provides students with an overview of the field of interior (environmental) design, including an understanding of fundamental construction knowledge and skills needed in the field. Exercises include small scale space analysis and functional planning based on user needs, furniture arrangement and selection, materials and finishes considerations

and presentation techniques. Students will also learn basics regarding building practices, building structures, residential construction techniques, building materials and plan reading. Includes building codes, sustainable design practices, and the preparation of site and construction plans, elevations, sections, three-dimensional drawings details and hand renderings as they relate to construction and presentation drawings.

7128 Materials, Finishes, and Design

MAT FIN DES

Materials, Finishes, and Design examines the physical properties and characteristics of furniture, materials, finishes, and architectural detailing. The course includes an intensive study of textiles, including fiber sources, identification and classification to finish and sustainable qualities. Students will apply textile knowledge to interior textile fabrications including window treatments, upholstery, carpet and wall coverings. Content addresses environmental issues and problems in specifying, estimating, and installing these materials.

7248 Interior Design Capstone

INT DES CAP

The Interior Design Capstone course is designed to provide students a chance to extend their knowledge and skills through additional course work and a work-based learning experience.

Radio and Television

7139 Principles of Broadcasting

PRIN BROAD

The purpose of the Principles of Broadcasting course is to provide entry-level fundamental skills for students who wish to seek or pursue opportunities in the field of broadcasting or mass media. Students will explore the technical aspects of audio and sound design for radio production and distribution, as well as, the technical aspects of video production and distribution.

7306 Audio and Video Production Essentials

AUD VID PROD

Audio and Video Production Essentials provides an in-depth study on audio and video production techniques for radio, television, and digital technologies. Students will learn skills necessary for audio production and on-air work used in radio and other digital formats. Additionally, experience will be gained in the development of the video production process; including skills in message development, directing, camera, video switcher, and character generator operations.

7307 Mass Media Production

MASS MED PROD

Mass Media Production will focus on the study of theory and practice in the voice and visual aspects of radio and television performance. In addition, this course introduces the skills used to acquire and deliver news stories in a digital media format. Students will learn how to research issues and events, interview news sources, interact with law enforcement and government officials, along with learning to write in a comprehensive news style.

7308 Radio & TV Broadcasting Capstone

RAD TV BROAD CAP

This course will cover a variety of domains further building on skills in video production, and broadcast industry practices specific to radio, television, and digital media. Attention will be given to cross-industry synergies, emerging technologies, and the global market for media. Students are highly encouraged to do a video newscast or radio practicum to gain real world experience. In most cases this practicum may be completed through a school-based enterprise.

Business Management

4518 Introduction to Business

INTO BUSS

Introduction to Business introduces students to the world of business, including the concepts, functions, and skills required for meeting the challenges of operating a business in the twenty- first century on a local, national, and/or international scale. The course covers business management, entrepreneurship, marketing fundamentals, and business ethics and law. The course develops business vocabulary and provides an overview of business and the role that business plays in economic, social, and political environments.

7201 Small Business Operations Capstone

BUS MGMT CAP

The Small Business Operations Capstone is an applied course, and students will be implementing the correct legal, business, human resources, operations, marketing and financial structures after de- risking their idea and launching their business.

4562 Principles of Business Management

PRIN BUS

Principles of Business Management examines business ownership, organization principles and problems, management, control facilities, administration, financial management, and development practices of business enterprises. This course will also emphasize the identification and practice of the appropriate use of technology to communicate and solve business problems and aid in decision making. Attention will be given to developing business communication, problem-solving, and decision-making skills using spreadsheets, word processing, data management, and presentation software.

Business Administration

7143 Management Fundamentals

MGMT FUND

Management Fundamentals describes the functions of managers, including the management of activities and personnel. Describes the judicial system and the nature and sources of law affecting business. Studies contracts, sales contracts with emphasis on Uniform Commercial Code Applications, remedies for breach of contract and tort liabilities. Examines legal aspects of property ownership, structures of business ownership, and agency relationships.

5914 Marketing Fundamentals

MRKT FUND

Marketing Fundamentals provides a basic introduction to the scope and importance of marketing in the global economy. Course topics include the seven functions of marketing: promotion, channel management, pricing, product/service management, market planning, marketing information management, and professional selling skills. Emphasis is marketing content but will involve use of oral and written communications, mathematical applications, problem-solving, and critical thinking skills through the development of an integrated marketing plan and other projects.

4524 Accounting Fundamentals

ACCT FUND

Accounting Fundamentals introduces the language of business using Generally Accepted Accounting Principles (GAAP) and procedures for proprietorships and partnerships using double-entry accounting. Emphasis is placed on accounting principles as they relate to both manual and automated financial systems. This course involves understanding, analyzing, and recording business transactions and preparing, analyzing, and interpreting financial reports as a basis for decision-making.

7256 Business Administration Capstone

BUS ADMIN CAP

The Business Administration Capstone course will allow students to explore advanced topics in business leadership including Human Resources and International Business. Additionally students will have the chance to complete Managerial Accounting. Throughout the course students will develop business communication skills through work on projects, labs, and simulations. All of these courses represent key business competencies required by nearly all postsecondary Business schools.

Business Operations and Technology

7153 Principles of Business Operations and Technology

PRIN BUS OP TECH

The Principles of Business Operations and Technology course will prepare students to plan, organize, direct, and control the functions and processes of a firm or organization and be successful in a work environment. Students are provided opportunities to develop attitudes and apply skills and knowledge in the areas of business, management, Microsoft office, and finance. Individual experiences will be based upon the student's career and educational goals.

7144 Business Office Communications

BUS OFF COMM

The Business Office Communications course emphasizes the analysis of communication to direct the choice of oral and written methods and techniques. It includes practice in writing a variety of messages used to communicate in business and industry with an emphasis on the potential impact of the message on the receiver as a basis for planning and delivering effective business communications. Through projects and the development of messages students will develop their knowledge and skills for the use of Microsoft Word and Microsoft PowerPoint.

7146 Digital Data Applications

DGTL REC KEEP

Students will use Microsoft Excel to sort and search records, combine files, produce reports, and to extract data from a file. This course is designed to include creating and formatting worksheets, using formulas and basic functions, creating charts, and printing professional-looking reports. Additionally students will use Microsoft Access to create a database and to manage a database through the creation and modification of a query. Students will also be expected to produce reports from the information.

7254 Business Operations and Technology Capstone

BUS OPER CAP

Digital literacy has become increasingly important to the business environment. Technological advances provide opportunities for businesses to survey inclusion of new innovations. This course discusses, identifies, researches, and applies emerging technologies. Discussing new technology and understanding the importance of updating skills is necessary for today's business operations.

Construction

4792 Introduction to Construction

INT CONST

Introduction to Construction offers students hands-on activities and real-world experiences related to the skills essential in residential, commercial, and civil building construction. During the course students will be introduced to the history and traditions of construction trades. The student will also learn and apply knowledge of the care and safe use of hand and power tools as related to each trade. In addition, students are introduced to blueprint reading, applied math, basic tools and equipment, and safety. Students will demonstrate building construction techniques, including concrete and masonry, framing, electrical, plumbing, dry walling, Heating, Ventilation, and Air Conditioning (HVAC), and painting as developed locally in accordance with available space and technologies. Students learn how architectural ideas are converted into projects and how projects are managed during a construction project in this course. Students study construction technology topics such as preparing a site, doing earthwork, setting footings and foundations, building the superstructure, enclosing the structure, installing systems, finishing the structure, and completing the site. Students also investigate topics related to the purchasing and maintenance of structures, special purpose facilities, green construction and construction careers.

5654 Construction: Special Topics

ARCH CNS ST

Construction: Special Topics is an extended-learning experience designed to address the advancement and specialization of careers within the career cluster through the provision of a specialized course for a specific workforce need in the school's region. This learning experience takes place at a qualified site, and is designed to give the student the opportunity to learn and practice technical skills (while working under the direction of the appropriately licensed professional). Throughout the course, students should focus on learning about employment opportunities and obtaining the knowledge, skills and attitudes essential for success in a specific occupation. Course standards and curriculum must be tailored to the specific profession, must prepare students to advance in this career field, and where applicable, must provide students with opportunities for certification or dual credit. Participation in a related CTSO encourages the development of leadership, communication and career related skills, and opportunities for community service.

6132 Advanced Career & Technical Education, College Credit: Construction

ADV CTE CC AC

Advanced Career & Technical Education, College Credit: Construction is a course title covering any CTE advanced course offered for credit by an accredited postsecondary institution through an adjunct agreement with a secondary school. The intent of this course is to allow students to earn

college credit for courses with content that goes beyond that currently approved for high school credit. This course may be used for any dual enrollment course, including a joint program of study involving a postsecondary partnership.

7130 Principles of Construction Trades

PRIN CON TR

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, learn 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.

Building and Facilities Maintenance

7285 Building and Facilities Maintenance Fundamentals

BLDG FAC MAINT FUND

Building and Facilities Maintenance Fundamentals prepares students to complete basic maintenance tasks (like minor construction repairs) and be able to repair and/or replace various building materials including flooring, wall covering, hardware, lighting and plumbing fixtures.

7286 Advanced Building and Facilities Maintenance

ADV BLDG FAC MAINT

Advanced Building and Facilities Maintenance prepares students to complete more advanced repairs involving a building's mechanical system including electrical, Heating, Ventilation, and Air Conditioning (HVAC), and plumbing.

7287 Building and Facilities Maintenance Capstone

BLDG FAC MAINT CAP

Building and Facilities Maintenance Capstone will continue to develop students' facilities maintenance skills (ideally through a work-based learning experience). Students will also explore additional topics such as processing work orders, fair housing regulation compliance, environmental and regulation compliance, reporting and documentation of maintenance activities, and implementation of a preventive maintenance schedule.

Civil Construction

7121 Civil Construction Fundamentals

CIV CON FUN

Civil Construction Fundamentals covers the first half of NCCER Heavy Highway Construction Level 1. Its modules cover topics such as orientation to the trade, identification of equipment used in heavy highway construction, heavy highway construction safety, work zone safety, soils, site work, excavation math, and interpretation of civil drawings. The NCCER Heavy Highway Construction Level 1 Certificate will not be awarded until the student successfully completes both this course and Advanced Civil Construction.

7118 Advanced Civil Construction

ADV CIV CON

Advanced Civil Construction builds upon the knowledge and skills learned in the fundamentals course and covers the second half of NCCER Heavy Highway Construction Level 1. Its modules cover topics such as rigging practices, crane safety and emergency procedures, basic principles of cranes, and crane communications. The NCCER Heavy Highway Construction Level 1 Certificate and wallet card will also be awarded upon successful completion of this course.

7240 Civil Construction Capstone

CIV CSTR CAP

The Civil Construction Capstone covers topics such as earthmoving, finishing and grading, trenching and excavating, plant operations, paving, horizontal formwork, and vertical formwork. Additionally, students learn skills associated with working with concrete and bridge construction. The course prepares students for the NCCER Level 2 Certificate.

Construction Trades - Carpentry

7123 Construction Trades: General Carpentry

CON TRD GC

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.

7122 Construction Trades: Framing and Finishing

CON TRD FR FIN

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.

7242 Construction Trades: General Carpentry Capstone

CSTR TR CAP

The Construction Trades: General Carpentry Capstone allows students to gain a deeper understanding and experience of the field of carpentry. This course builds upon the skills and concepts that students were first introduced to in Principles of Construction Trade, Construction Trades: General Carpentry, and Construction Trades: Framing and Finishing. Additional topics include an introduction to the National Electric Code, electrical safety, electrical circuits, basic electrical construction drawings, and residential electrical services. The course prepares students for the NCCER Carpentry Electrical Level 1 Certificates.

Construction Trades - Masonry

7390 Construction Trades: Masonry Fundamentals

MASON FUND

The Masonry Fundamentals course covers foundations of completing masonry work including safety, tools, and the basics of brick and block construction. After mastering the basics, students will be introduced to advanced masonry techniques including control and expansion joints, corners and intersections. Students will also understand the impacts of climate on masonry work and how to inspect masonry work for quality control.

7391 Construction Trades: Masonry Capstone

MASON CAP

The Masonry Capstone builds upon the skills learned in the Masonry Fundamentals course. Students become familiar with specialty techniques, such as the construction of sound-barrier walls, arches, acid and refractory brick, and glass block. Students will also learn the advantages and process of repairing and restoring masonry work. The course may be aligned to a pre-apprenticeship program that will lead to direct admittance into a full registered apprenticeship program. The program includes approximately 300 hours of instruction with on-the-job training.

Construction Trades - Electrical

7124 Construction Trades: Electrical Fundamentals

ELEC FUN

This course covers the materials present within the NCCER Electrical Level 1 Certificate. Included modules cover topics such as an overview of the electrical trade, electrical safety, introduction to electrical circuits, electrical theory, introduction to the National Electrical Code, device boxes, hand bending, raceways and fittings, conductors and cables, basic electrical construction drawings, residential electrical services, and electrical test equipment. The NCCER Electrical Level 1 Certificate and wallet card will also be awarded upon successful completion of this course.

7119 Construction Trades: Advanced Electrical

ADV ELEC

Advanced Electrical covers topics such as alternating current, motors (theory and application), electric lighting, conduit bending, and pull and junction boxes. The second part of the course will cover topics such as conductor installations, cable tray, conductor terminations and splices, grounding and bonding, circuit breakers and fuses, control systems, and additional electrical concepts. Students will be ready to complete the NCCER Electrical Level 2 Certificate upon successful completion of the course.

7263 Construction Trades: Electrical Capstone

CT ELEC CAP

Construction Trades Electrical Capstone builds upon the skills learned in Electrical Fundamentals and Advanced Electrical. Topics covered include load calculations (branch and feeder circuits), conductor selection and calculations, and the practical applications of lighting. This course will also cover commercial electrical services including distribution equipment; transformers; and voice, data and video. Completion of this course will prepare students for the NCCER Electrical Level 3 Certificate. Students may also complete an Ivy Tech CT by completing coursework in general carpentry.

Heating, Ventilation, and Air Conditioning (HVAC)

7131 Principles of Heating, Ventilation, and Air Conditioning (HVAC)

PRN HVAC

Principles of Heating, Ventilation, and Air Conditioning (HVAC) covers many of the topics needed for students to be successful in the mechanical construction industry. Modules include history of the HVAC Industry, OSHA 10-Hour Construction Industry Training, and basic communication and customer service skills. This course will also cover basic electricity concepts.

7125 HVAC Fundamentals

HVAC FUN

Heating, Ventilation, and Air Conditioning (HVAC) Fundamentals introduces fundamentals applicable to the heating and refrigeration phases of air conditioning. Course topics include: types of units, parts, basic controls, functions, and applications. Emphasis is placed on standard industry practices, tool and meter use, temperature measurement, heat flow, the combustion process, and piping installation practices. The course also covers the basic sequence of operation for gas, oil and electric furnaces. Students receive an introduction to compression systems used in mechanical refrigeration including the refrigeration cycle and system components. The course introduces students to safety procedures, proper use of tools used to install and service refrigeration equipment, refrigerant charging and recovery, system evacuation, calculating superheat and subcooling, and using a refrigerant temperature/pressure chart. This course utilizes lectures, labs, and online simulations to prepare students for the nationally recognized certification exam as part of the outcome assessment learning objectives.

7126 HVAC Service

HVAC SER

Heating, Ventilation, and Air Conditioning (HVAC) Service continues the study of air conditioning and refrigeration along with the procedures used to analyze mechanical and electrical problems encountered when servicing heating systems. Students will better understand compressors, metering devices, system recharging, refrigerant recovery, basics of motor types, equipment installation and troubleshooting practices as they apply to air conditioning and refrigeration systems. Additionally, students will be able to understand electrical schematics and connection diagrams, combustion testing, venting and combustion air requirements, sequence of operation, heating controls, troubleshooting techniques, installation practices, basic codes applying to furnace codes, and service procedures. This course will use lecture, lab and online simulation to prepare students for the nationally recognized certification exam as part of the outcome assessment learning objectives.

7244 HVAC Capstone

HVAC CAP

The Heating, Ventilation, and Air Conditioning (HVAC) Capstone course covers procedures used to analyze mechanical and electrical problems encountered when servicing heating systems. Topics include electrical schematics and connection diagrams, combustion testing, venting and combustion air requirements, sequence of operation, heating controls, troubleshooting techniques, installation practices, basic codes applying to furnace codes, and service procedures. Students may also have the opportunity to gain an understanding of Heat Pump Systems or to develop skills needed to fabricate and install duct work. This course will use lecture, lab and online simulation to prepare students for the nationally recognized certification exam as part of the outcome assessment learning objectives.

Heavy Equipment Operator

7290 Heavy Equipment Fundamentals

HVY EQUIP FUND

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.

7291 Advanced Heavy Equipment Operations

ADV HVY EQUIP OPER

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.

7292 Heavy Equipment Capstone

HVY EQUIP CAP

Heavy Equipment Capstone covers the second part of NCCER Heavy Equipment Level 2 and all of Level 3. Students will learn to operate Loaders, Skid Steers, Rough Terrain Forklifts, Backhoes, and Dozers.

Plumbing and Pipefitting

7133 Principles of Plumbing and Pipefitting

PRIN PLB PIPE

Principles of Plumbing and Pipefitting covers much of the NCCER Level I Curriculum for Plumbing and is a prerequisite to future plumbing courses. Its modules cover topics such as an introduction to the plumbing profession, basic safety, tools used in the plumbing trade, an introduction to plumbing drawings, and all basic skills needed to continue education in the plumbing program.

7129 Plumbing and Pipefitting Fundamentals

PLB PIPE FUN

Plumbing and Pipefitting Fundamentals builds on the knowledge and skills developed in the principles course. Students will gain a better understanding of a variety of plumbing materials and

fittings. As well as focus on common plumbing installations including piping, drains, fixtures, and valves.

7120 Advanced Plumbing and Pipefitting

ADV PLB PIPE

Advanced Plumbing and Pipefitting prepares students for more advanced installations including structural penetrations, insulations, and water heaters. Additionally, students will gain a better understanding of basic electricity and fuel systems that are required for these advanced installations.

7264 Plumbing and Pipefitting Capstone

PLB PIPE CAP

The Plumbing and Pipefitting Capstone builds on the skills learned in Principles of Construction Trades, Plumbing and Pipefitting, and Advanced Plumbing and Pipefitting. This course is strictly for students who will either be prepared to earn at least a NCCER Level 3 or another similar plumbing certification and/or have completed at least one full-year's worth of an apprenticeship. In order to facilitate the completion of at least one of those goals, additional course competencies are expected to be developed on an as-needed basis.

CTE and WBL Courses

Nonstandard CTE Courses

5239 Career & Technical Education Pilot Course: (Insert title descriptive of course content)

CTE PILOT

Career and Technical Education Pilot Course is a course title that would be used for enrollment reporting purposes by schools that are piloting a new Career and Technical Education course**. Schools must apply for a non-standard course waiver and propose a course description and standards, explain how the pilot course relates to an existing or innovative pathway, and provide a rationale describing business and industry need and support.** Schools are to follow the pilot course framework and provide feedback at the end of the pilot year on that framework.

7392 Career & Technical Education Principles Course: (Insert title descriptive of course content)

CTE PRIN

Career and Technical Education Principles Course is a course title that would be used for enrollment reporting purposes by schools that are offering a locally created CTE Concentrator Sequence**. Schools must apply to Career and Technical Education at the Indiana Commission for Higher Education for a non-standard course waiver** and propose a course description and standards, explain how the locally created concentrator program is an innovative pathway, and provide a rationale describing business and industry need and support. Schools are to follow the approved course framework.

7393 Career & Technical Education Concentrator A Course: (Insert title descriptive of course content)

CTE CONCA

Career and Technical Education Concentrator A Course is a course title that would be used for enrollment reporting purposes by schools that are offering a locally created CTE Concentrator Sequence. **Schools must apply to Career and Technical Education at the Indiana Commission for Higher Education for a non-standard course waiver** and propose a course description and standards, explain how the locally created concentrator program is an innovative pathway, and provide a rationale describing business and industry need and support. Schools are to follow the approved course framework.

7394 Career & Technical Education Concentrator B Course: (Insert title descriptive of course content)

CTE CONCB

Career and Technical Education Concentrator B Course is a course title that would be used for enrollment reporting purposes by schools that are offering a locally created CTE Concentrator Sequence. **Schools must apply to Career and Technical Education at the Indiana Commission for Higher Education for a non-standard course waiver** and propose a course description and standards, explain how the locally created concentrator program is an innovative pathway, and provide a rationale describing business and industry need and support. Schools are to follow the approved course framework.

7395 Career & Technical Education Capstone Course: (Insert title descriptive of course content)

CTE CAP

Career and Technical Education Capstone Course is a course title that would be used for enrollment reporting purposes by schools that are offering a locally created CTE Concentrator Sequence. **Schools must apply to Career and Technical Education at the Indiana Commission for Higher Education for a non-standard course waiver** and propose a course description and standards, explain how the locally created concentrator program is an innovative pathway, and provide a rationale describing business and industry need and support. Schools are to follow the approved course framework.

Foundational CTE Courses

5394 Preparing for College and Careers (PCC)

PREP CC

Preparing for College and Careers addresses the knowledge, skills, and behaviors all students need to be prepared for success in college, career, and life. The focus of the course is the impact of today's choices on tomorrow's possibilities. Topics to be addressed include twenty- first century life and career skills; higher order thinking, communication, leadership, and management processes; exploration of personal aptitudes, interests, values, and goals; examining multiple life roles and responsibilities as individuals and family members; planning and building employability skills; transferring school skills to life and work; and managing personal resources. This course includes reviewing the national career clusters and Indiana's College and Career Pathways, in-depth investigation of one or more pathways, reviewing graduation plans, exploring postsecondary options and making career plans, and developing personal and career portfolios. A project based approach, including computer and technology applications, cooperative ventures between school and community, simulations, and real world experiences is recommended.

5237 CTSO Leadership Development in Action

LEAD DEV

Leadership Development in Action is a project-based course in which students integrate higher order thinking, communication, leadership, and management processes to conduct Career and Technical Student Organization (CTSO) leadership projects at the local, state, or national level. Each student will create a vision statement, establish standards and goals, design and implement an action plan and timeline, reflect on accomplishments, and evaluate results.

Authentic, independent application through CTSO student-directed programs or projects, internship, community-based study, or in-depth laboratory experience is required. Research and development, interdisciplinary projects, and/or collaboration with postsecondary faculty, community agencies, or organizations are appropriate approaches. **Instructor must be a current chapter advisor of an Indiana-recognized CTSO. State and national membership in an Indiana recognized CTSO is required of any student enrolled in this course.** Service learning experiences are highly recommended. Achievement of applicable Career and Technical Education (CTE), academic, and employability standards will be documented through a required student portfolio.

4565 Computing Foundations for a Digital Age

COMPFOUND

Computers and the internet have revolutionized the way we access and disseminate information. As technology continues to change at an ever-increasing pace, the need for students to gain a foundational understanding of computer science is clear. Computing Foundations for a Digital Age is designed to introduce students to five major topics within computer science including computing systems, networks and the internet, data and analysis, algorithms and planning, and impacts of computing. The course introduces foundational computing concepts while exploring current events and building critical thinking, collaboration, problem solving, and other important skills that are invaluable for life in a global and technologically advancing society.

4508 Technical/Business Communication

TECH BUS COMM

Technical/Business Communications provides students with the communication and problem-solving skills to function effectively in the workplace. Areas studied include written/oral/visual communication, listening, informational reading, Internet research/analysis, and electronic communication. Concepts addressed will include adapting communication to the situation, purpose, and audience. Students produce related documents such as employee handbooks, instructional manuals, employment communication, organizational communication, business reports, and social/professional situations using word processing, presentation, multimedia, and desktop publishing software.

4540 Personal Financial Responsibility

PRSFINRSP

Personal Financial Responsibility addresses the identification and management of personal financial resources to meet the financial needs and wants of individuals and families, considering a broad range of economic, social, cultural, technological, environmental, and maintenance factors. This course helps students build skills in financial responsibility and decision making; analyze personal standards, needs, wants, and goals, identify sources of income, savings, and investing; understand banking, budgeting, record-keeping and manage risk, insurance and credit card debt. A project based approach and applications through authentic settings such as work based observations and service learning experiences are appropriate. Direct, concrete applications of mathematics proficiencies in projects are encouraged.

4800 Computers in Design & Production

COMP DES

Computers in Design and Production is a course that specializes in using modern technological processes, computers, design, and production systems in the production of products and structures through the use of automated production systems. Emphasis is placed on using modern technologies and on developing career related skills for electronics, manufacturing, precision machining, welding, and architecture career pathways. Students apply ingenuity using tools, materials, processes, and resources to create solutions as it applies in the electronics, manufacturing, precision machining, welding, and architecture. The content and activities should be developed locally in accordance with available advanced technologies in the school. Course content should address major technological content related to topics such as: Architectural drawing and print design, design documentation using CAD systems; assignments involving the interface of CAD, CNC, CAM, and CIM technologies; computer simulation of products and systems; publishing of various media; animation and related multimedia applications; 3-D modeling of products or structures; digital creation and editing of graphics and audio files; control technologies; and automation in the modern workplace.

5330 Adult Roles and Responsibilities

ADULTROLES

Adult Roles and Responsibilities is recommended for all students as life foundations and academic enrichment, and as a career sequence course for students with interest in family and community services, personal and family finance, and similar areas. This course builds knowledge, skills, attitudes, and behaviors that students will need as they complete high school and prepare to take the next steps toward adulthood in today's society. The course includes the study of interpersonal standards, lifespan roles and responsibilities, individual and family resource management, and financial responsibility and resources. A project-based approach that utilizes higher order thinking, communication, leadership, management processes, and fundamentals to college and career success is recommended in order to integrate these topics into the study of adult roles and responsibilities. Direct, concrete mathematics and language arts proficiencies will be applied.

Service learning and other authentic applications are strongly recommended. This course provides the foundation for continuing and postsecondary education in all career areas related to individual and family life.

5334 Consumer Economics

CONS ECON

Consumer Economics enables students to achieve high standards and competencies in economic principles in contexts of high relevancy and applicability to their individual, family, workplace, and community lives. A project-based approach that utilizes higher order thinking, communication, leadership, and management processes is recommended in order to integrate suggested topics into the study of consumer economics issues. The course focuses on interrelationships among economic principles and individual and family roles of exchanger, consumer, producer, saver, investor, and citizen. Economic principles to be studied include scarcity, supply and demand, market structure, the role of government, money and the role of financial institutions, labor productivity, economic stabilization, and trade. Depending on needs and resources, this course may be taught in a local program. In schools where it is taught, it is recommended for all students regardless of their career pathway, in order to build basic economics proficiencies.

5340 Advanced Nutrition and Wellness

ADV NTRN WEL

Advanced Nutrition and Wellness is a course which provides an extensive study of nutrition. This course is recommended for all students wanting to improve their nutrition and learn how nutrition affects the body across the lifespan. Advanced Nutrition and Wellness is an especially appropriate course for students interested in careers in the medical field, athletic training and dietetics. This course builds on the foundation established in Nutrition and Wellness, which is a recommended prerequisite. This is a project-based course utilizing higher-order thinking, communication, leadership and management processes. Topics include extensive study of major nutrients, nutritional standards across the lifespan, influences on nutrition/food choices, technological and scientific influences, and career exploration in this field. Laboratory experiences will be utilized to develop food handling and preparation skills; attention will be given to nutrition, food safety, and sanitation. This course is the second in a sequence of courses that provide a foundation for continuing and postsecondary education in all career areas related to nutrition, food, and wellness.

5342 Nutrition and Wellness

NTRN WLNS

Nutrition and Wellness is an introductory course valuable for all students as a life foundation and academic enrichment; it is especially relevant for students interested in careers related to nutrition, food, and wellness. This is a nutrition class that introduces students to only the basics of food preparation so they can become self-sufficient in accessing healthy and nutritious foods.

Major course topics include nutrition principles and applications; influences on nutrition and wellness; food preparation, safety, and sanitation; and science, technology, and careers in nutrition and wellness. A project-based approach that utilizes higher order thinking, communication, leadership, management processes, and fundamentals to college and career success is recommended in order to integrate these topics into the study of nutrition, food, and wellness. **Food preparation experiences are a required component.** Direct, concrete mathematics and language arts proficiencies will be applied. This course is the first in a sequence of courses that provide a foundation for continuing and postsecondary education in all career areas related to nutrition, food, and wellness.

5360 Advanced Child Development

ADVCHLDDEV

Advanced Child Development is for those students interested in life foundations, academic enrichment, and/or careers related to knowledge of children, child development, and nurturing of children. This course addresses issues of child development from ages four through age eight (grade three). It builds on the Child Development course, which is a recommended prerequisite. Advanced Child Development includes the study of professional and ethical issues in child development; child growth and development; child development theories, research, and best practices; child health and wellness; teaching and guiding children; special conditions affecting children; and career exploration in child development and nurturing. A project-based approach that utilizes higher order thinking, communication, leadership, management, and fundamentals to college and career success is recommended in order to integrate these topics into the study of child development. Direct, concrete mathematics and language arts proficiencies will be applied.

5362 Child Development

CHLD DEV

Child Development is an introductory course for all students as a life foundation and academic enrichment; it is especially relevant for students interested in careers that draw on knowledge of children, child development, and nurturing of children. This course addresses issues of child development from conception/prenatal through age 3. It includes the study of prenatal development and birth, growth and development of children, child caregiving and nurturing, and support systems for parents and caregivers. A project-based approach that utilizes higher order thinking, communication, leadership, management processes, and fundamentals to college and career success is recommended in order to integrate these topics into the study of child development. Direct, concrete mathematics and language arts proficiencies will be applied. Authentic applications such as introductory laboratory/field experiences with young children and/or service learning that build knowledge of children, child development, and nurturing of children are strongly recommended. This course provides the foundation for continuing and postsecondary education in all career areas related to children, child development, and nurturing of children.

5364 Interpersonal Relationships

INTRP RLT

Interpersonal Relationships is an introductory course that is especially relevant for students interested in careers that involve interacting with people. It is also valuable for all students as a life foundation and academic enrichment. This course addresses knowledge and skills needed for positive and productive relationships in career, community, and family settings. Major course topics include communication skills; leadership, teamwork, and collaboration; conflict prevention, resolution, and management; building and maintaining relationships; and individual needs and characteristics and their impacts on relationships. A project-based approach that utilizes higher order thinking, communication, leadership, and management processes, and fundamentals to college and career success is recommended in order to integrate these topics into the study of interpersonal relationships. Direct, concrete language arts proficiencies will be applied. Service learning and other authentic applications are strongly recommended. This course provides a foundation for continuing and postsecondary education for all career areas that involve interacting with people both inside and outside of a business/organization, including team members, clients, patients, customers, and the general public.

5366 Human Development and Wellness

HUMAN DEV

Human Development and Wellness is valuable for all students as a life foundation and academic enrichment. It is especially relevant for students interested in careers impacted by individuals' physical, social, emotional, and moral development and wellness across the lifespan. Major topics include principles of human development and wellness, impacts of family on human development and wellness, factors that affect human development and wellness, practices that promote human development and wellness, managing resources and services related to human development and wellness, and career exploration in human development and wellness. Life events and contemporary issues addressed in this course include (but are not limited to) change, stress, abuse, personal safety, and relationships among lifestyle choices, health and wellness conditions, and diseases. A project-based approach that utilizes higher order thinking, communication, leadership, and management processes is recommended in order to integrate the study of these topics. Authentic applications through service learning are encouraged.

4512 Business Math

BUS MATH

Business Math is a course designed to prepare students for roles as entrepreneurs, producers, and business leaders by developing abilities and skills that are part of any business environment. A solid understanding of math including algebra, basic geometry, statistics, and probability provides the necessary foundation for students interested in careers in business and skilled trade areas. The content includes mathematical operations related to accounting, banking and finance, marketing, and management. Instructional strategies should include simulations, guest speakers, tours, Internet research, and business experiences.

7218 Technical Math

TECH MATH

Technical Math is designed to help students develop mathematical reasoning and real-world skills in analyzing verbal and written descriptions, translating them into algebraic, geometric, trigonometric, and statistical statements and applying them to solve problems in fabrication, manufacturing, and business. The course will include at least six lab activities or projects to allow faculty and students to apply mathematics principles to work-related situations.

4528 Digital Applications and Responsibility

DIG APPS RESP

Digital Applications and Responsibility prepares students to use technology in an effective and appropriate manner in school, a job, or everyday life. Students develop skills related to word processing, spreadsheets, presentations, and communications software. Students learn what it means to be a good digital citizen and how to use technology, including social media, responsibly. Students expand their knowledge of how to use digital devices and software to build decision-making and problem-solving skills. Students should be provided with the opportunity to seek industry-recognized digital literacy certifications.

Work-Based Learning CTE Courses

6162 Cooperative Education

COOP EDU

Cooperative Education is an approach to employment training that spans all career and technical education program areas through school-based instruction and on the job training. The course combines time spent on workplace activities and time spent doing school-based instruction, focused on employability skills development. Additionally, all state and federal laws and regulations related to student employment and cooperative education must be followed.

7156 Technical Skills Development

TECH SKL DEV

The Technical Skills Development course may be used to provide students with the opportunity to apply the technical knowledge and skills learned in a Concentrator A or B course through additional real world learning experiences such as lab activities, project based learning or a work-based learning experience. Students must be co-enrolled in a Concentrator A and/or B course in order to be enrolled in the Technical Skills Development course.

0530 Career Exploration Internship (CEI)

CAR EXP INT

The Career Exploration Internship (CEI) course consists of a paid or unpaid work experience that provides for workplace learning aligned to a student's career interests. Unlike the Work-Based Learning Capstone course in which students participate in a WBL experience aligned to a specific occupation, CEI is intended to expose students to broad aspects of a particular industry or career cluster area. This can include rotating through a variety of work sites or departments. In addition to their workplace learning activities, students participate in (1) regularly scheduled meetings with their classroom teacher, or (2) a regularly scheduled seminar with the teacher for the purpose of helping students make the connection between academic learning and their work-related experiences.

A clear partnership agreement and training plan is developed by the student, parent or guardian, school, and employer partner to guide the student's work-based experiences and assist in evaluating achievement and performance. Specific instructional standards tied to the career cluster or pathway and learning objectives for the internship must be written to clarify the expectations of all parties.

5974 WBL Capstone

WBL CAPS

WBL Capstone is a stand-alone course that provides students the opportunity to gain expertise in a specific occupation aligned to the student's CTE pathway. This course occurs in real or simulated workplace settings and involves an employer assigning a student meaningful job tasks to develop his or her skills, knowledge, and readiness for work. A clear partnership agreement and training plan is developed by the student, parent or guardian, school, and employer partner to guide the student's work-based experiences and assist in evaluating achievement and performance. Related instruction shall be organized and planned around the activities associated with the student's individual job and career objectives in a pathway and shall be taught either on-the-job or in a classroom setting during the same semester the student is participating in the work-based experience. The related instruction should cover: (a) employability skills, and (b) specific occupational competencies to help prepare the student for further education and training or employment within their career pathway.

6149 Youth Apprenticeship

YOU APPSHIP

Youth apprenticeships are intensive Work-Based Learning experiences, which utilize a combination of on-the-job (OJT), and classroom related technical instruction (RTI). Youth Apprenticeships may take a variety of forms, including Pre-Apprenticeships, Modern Youth Apprenticeships, and apprenticeships focused on youth that are not federally registered. Youth Apprenticeships, in any form, should support progressive skill acquisition and lead to postsecondary or industry credentials.

6148 Apprenticeship

APPSHIP

Apprenticeships are defined as intensive work-based learning opportunities that generally last from one to six years and provide a combination of on-the-job training and formal classroom instruction. They are intended to support progressive skill acquisition, lead to postsecondary credentials and, in some cases, postsecondary degrees. Apprenticeships often involve 2,000 to 10,000 on-the-job hours. Students 16-years-old or older may qualify for an apprenticeship. Per the Indiana General Assembly, any apprenticeship program must be registered under the federal National Apprenticeship Act (29 U.S.C. 50 et seq.) or another federal apprenticeship program.

Digital Technology

4578 Digital Technology: Special Topics

DT ST

Digital Technology: Special Topics is an extended learning experience designed to address the advancement and specialization of careers within the career cluster through the provision of a specialized course for a specific workforce need in the school's region. The learning experience is at a qualified site, and is designed to give the student the opportunity to learn and practice technical skills; while working under the direction of the appropriately licensed professional.Clo Throughout the course, students will focus on learning about employment opportunities and obtaining the knowledge, skills and attitudes essential for success in specific occupations. Course standards and curriculum must be tailored to the specific profession, preparing students to advance in this career field, and where applicable, provide students with opportunities for certification or dual credit. Participation in a related CTSO encourages the development of leadership, communication and career related skills, and opportunities for community service.

6022 Advanced Career & Technical Education, College Credit: Digital Technology

ADV CTE CC IT

Advanced Career and Technical Education, College Credit is a course title covering any CTE advanced course offered for credit by an accredited postsecondary institution through an adjunct agreement with a secondary school. The intent of this course is to allow students to earn college credit for courses with content that goes beyond that currently approved for high school credit. This course may be used for any dual enrollment course, including a joint program of study involving a postsecondary partnership.

7396 Advanced Digital Skills Capstone

DIG SKILL CAP

Digital Skills Capstone introduces digital skills and tools critical to manage information. The skills learned in this class will help individuals communicate and collaborate, develop and share digital content, and problem solve. This course will focus on applying advanced digital skills to a particular industry or occupation. The focus will be on advanced IT skills in programming, web, and app development, networking and sharing information, data science, and digital business analysis.

4803 Introduction to Computer Science and Digital Technology

INTRO CS IT

Introduction to Computer Science and Digital Technology allows students to explore the world of computer science and digital technology. Students will gain a broad understanding of the areas

composing computer science and digital technology fields. Specifically, there is a focus on the areas of computer science, cybersecurity, operations and support, networking, and software development in addition to career exploration in digital technology.

5252 Computer Science: Special Topics

CS SP TOP

Computer Science: Special Topics is an extended experience designed to address the advancement and specialization of computer science careers allowing schools to provide a specialized course for a specific computer science workforce need in the school's region. It prepares students with the knowledge, skills and attitudes essential for working in the field of computer science. Course standards and curriculum must be tailored to the specific computer science specialization. This course must prepare students for advancement in this career field and should provide students with opportunities for certification or dual credit.

7183 Principles of Computing

PRIN COMP INFO

Principles of Computing provides students the opportunity to explore how computers can be used in a wide variety of settings. The course will begin by exploring trends of computing and the necessary skills to implement information systems. Topics include operating systems, database technology, cybersecurity, cloud implementations and other concepts associated with applying the principles of good information management to the organization. Students will also have the opportunity to utilize basic programming skills to develop scripts designed to solve problems. Students will learn about algorithms, logic development, and flowcharting.

7488 Software and Cloud Foundations

CLOUD FOUND

Software and Cloud Foundations introduces students to concepts and practices of programming languages and software development. Students will become familiar with algorithms and the development of tools used to document/implement computer logic. Students will compare different program languages, programming paradigms such as real-time processing, web/databased applications, and other integrated development environments. Students will learn how to implement structed programming concepts and explore the uses of different programming languages. Throughout the course, students will develop, test, and debug programs in an integrated development environment. In addition to programming, students will gain a general understanding of cloud computing concepts, core services, security, architecture, pricing, and support. The course provides students with workforce preparation focused on the AWS Cloud Practitioner certification.

7490 AI and Data Fundamentals

AI DATA FUND

AI and Data Fundamentals introduce students to the basic concepts of databases including the types of databases, general database environment, and the importance of data in the business world. This course will provide discussion with hands-on activities which include database design, normalization of tables, and development of tables, queries, reports, and applications. Students will be familiarized with the use of the ANSI Structured Query Language. Students will be introduced to data concepts such as data warehousing, data mining, data visualization, data analysis, and big data.

AI/Machine Learning

7494 AI/Machine Learning Capstone

AI CAP

AI/Machine Learning Capstone introduces students to key methodologies in machine learning (ML), emphasizing how each technique aligns with real-world problem domains and use cases. Throughout the course, attention is given to the human and ethical dimensions of data collection, transformation, and model training, ensuring students understand both the technical and responsible practice of machine learning. Students will also explore Large Language Models (LLMs) as the contemporary paradigm of Natural Language Processing (NLP). Students will develop a practical understanding of how modern Artificial Intelligence (AI) language technologies are designed, deployed, and leveraged across industry applications.

Computer Science

7351 Topics in Computer Science

TOP COMP SCI

Topics in Computer Science is designed for students to investigate emerging disciplines within the field of computer science. Students will use foundational knowledge from 7183 Principles of Computing to study the areas of data science, artificial intelligence, app/game development, and security. Students will utilize knowledge related to these areas and programming skills to develop solutions to authentic problems.

7352 Computer Science

COMP SCI

Computer Science introduces the fundamental concepts of procedural programming. Topics include data types, control structures, functions, arrays, files, and the mechanics of running, testing, and debugging. The course also offers an introduction to the historical and social context of computing and an overview of computer science as a discipline.

7353 Computer Science Capstone

COMP SCI CAP

Computer Science Capstone provides a working understanding of the fundamentals of procedural and object-oriented program development using structured, modular concepts and modern object-oriented programming languages. The course introduces object-oriented concepts including classes, objects, inheritance, polymorphism, operator overloading, exception handling, recursion, abstract data types, streams and file I/O. Students will explore programming concepts such as software reuse, data abstraction and event-driven programming. Reviews control structures, functions, data types, variables, arrays, and data file access methods. Students will learn basic programming concepts such as sequence, iteration and decision structures; variables and constants; and functions and advanced concepts such as searches, sorts, collections, dictionaries, arrays, and linked lists. The course provides a basic understanding of the fundamental concepts involved when using the Java, Python and C# programming language. The emphasis will be on creating industry standard programs using current programming design software.

Cybersecurity (VU)

7179 Cybersecurity Fundamentals

CYBSEC FUN

This course introduces fundamental networking protocols and their hierarchical relationship in the context of conceptual Information Communication Technology (ICT) frameworks. Students will learn how networked hosts and applications communicate across networks. Emphasis is placed on security throughout the entire SDLC (Systems Development Life Cycle).

7178 Advanced Cybersecurity

ADV CYBSEC

Students will acquire the fundamentals of information and data security and understand the vulnerability most organizations have in their security systems with an emphasis on firewalls, security plans and Virtual Private Networks (VPNs). Discussions will include data security methods, authentication, network attacks, malicious code and viruses, wireless security, e-mail and web security and disaster recovery. This course will also focus on the managerial aspects of information security and assurance. Topics covered include access control models, information security governance, and information security program assessment and metrics. Coverage on the foundational and technical components of information security is included to reinforce key concepts such as security planning and contingencies, security policies, security management models, and practices and ethics.

7243 Cybersecurity Capstone

CYBER CAP

The Cybersecurity Capstone is designed to increase a student's ability to investigate advanced topics with a primary focus on computer forensics, cyber law, cybercrimes, and cyber forensics. Using Federal, State, and existing case laws, students will gain in-depth experience investigating and gathering evidence to prepare for a presentation in a court of law. This course will emphasize the need for structured investigation techniques and proper protocol for maintaining a chain of evidence. Students will learn to follow proper investigative procedures while using a variety of forensic software tools and techniques.

Cybersecurity and Information Assurance (ITCC)

7249 Cybersecurity Operations Capstone

CYBER OPER CAP

Cybersecurity Operations Capstone course introduces the core security concepts and skills needed to monitor, detect, analyze and respond to cybercrime, cyberespionage, insider threats, advanced persistent threats, regulatory requirements, and other cybersecurity issues facing organizations. It emphasizes the practical application of the skills needed to maintain and ensure security operational readiness of secure networked systems through an in-depth coverage of network protocols and ethical hacking. Students will apply fundamental concepts with project-based content exercises. Students will have a strong understanding of critical Linux and virtual technologies as well as Microsoft Windows clients and servers. Through hands-on instruction students will be prepared to interact with TCP/IP on the vast majority of networks in use today and learn threats and defense mechanisms. The skills developed in the curriculum prepares students for a career in the rapidly growing area of cybersecurity operations.

Data Analytics

7492 Data Analytics Capstone

DATA AN CAP

The Data Analytics Capstone examines American business through the study of business ownership, organization principles and problems, management, control facilities, administration, financial management, and development practices of American business enterprises. Students are introduced Structured Query Language (SQL) which is a database computer language used to manage, query, retrieve and manipulate data. Students are introduced to SQL as a high level tool in the management of data in client and server database environments. Students will use relational database management systems to develop SQL skills in a lab environment. The capstone course will introduce students to the concepts and tools used to visualize and analyze data. Students will connect to data stored in databases and spreadsheets, use data visualization software to gather, organize, categorize, and visualize data. Students will identify patterns in data through the creation of various charts and tables. Students will be introduced to technology and techniques used to

effectively consolidate, arrange, and analyze vast amounts of data. The course places emphasis on learning how to mine large amounts of data using common business intelligence and decision support tools.

Informatics

7484 Data Analytics and Informatics Operations

DATA OPS INFO

Data Analysis and Informatics Operations introduce students to the fundamentals of database structures, data management, and human-computer interaction (HCI). The course covers relational, hierarchical, network, and non-relational databases, along with data integrity, security, and unstructured data techniques such as Key-pair and JSON. Students will learn to use SQL commands for data manipulation and explore advanced concepts like big data, data warehousing, and data mining. Emphasis is placed on designing effective user interfaces, understanding user experience and usability, and applying HCI principles to create intuitive, accessible technologies. Through this course, students will develop the skills needed to analyze, design, and evaluate data systems and interactive interfaces in business settings.

7485 Informatics Capstone

INFO CAPS

The Informatics capstone course will introduce students to the concepts and tools used to visualize and analyze data. Students will connect to data stored in databases and spreadsheets, use data visualization software to gather, organize, categorize, and visualize data. Students will identify patterns in data through the creation of various charts and tables. The course places emphasis on learning how to mine large amounts of data using common business intelligence and decision support tools. The Informatics Capstone provides students with the opportunity to work at a job site that correlates to IT-related career objectives. Students will work within a team to identify and employ methodologies pertinent to the assessment, design, and operation of business computer information systems. Students will develop individual and team competencies working to employ current software tools to generate and illustrate the flow of the actual development of a project. The workforce preparation section of this course is focused on the CompTIA project certification.

Information Technology (IT) Operations

7180 Information Technology Fundamentals

INFO TECH FUN

Information Technology Fundamentals provides the necessary competencies required for an entry-level Information Technology professional. Students will have the knowledge required to assemble

components based on customer requirements, install, configure and maintain devices/software for end users, understand the basics of networking and security, properly and safely diagnose, resolve and document common hardware and software issues while applying troubleshooting skills. Students will also learn appropriate customer support, understand the basics of virtualization, desktop imaging, and deployment. This course should also prepare students for the CompTia A+ Certification Exam.

7181 Networking and Cybersecurity Operations

INFO TEC SUP SER

Advanced Information Technology will provide students with the fundamental concepts in networking and cybersecurity. Students are introduced to the principles and concepts of computer networking, covering the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. Students will be able to troubleshoot routers and switches and resolve common issues. The students will also explore the field of Cyber Security/Information Assurance focusing on the technical and managerial aspects of the discipline. Students will be introduced to the basic terminology, concepts, and best practices of computer/network security and the roles and responsibilities of management/security personnel. The students will learn the technologies used and techniques involved in creating a secure computer networking environment including authentication and the types of attacks against an organization.

7247 Cloud and Server Operations Capstone

CLD SRV OPER CAP

Cloud and Server Operations Capstone provides students with a general understanding of cloud computing concepts through a detailed overview of core services security architecture, pricing, and support. Students will also learn to implement, administer, and troubleshoot Information systems using the Microsoft Windows clients and servers in an enterprise environment. Students will be introduced to managing applications, files, folders, and devices in a Windows active directory enrvironment. Additionally, students have the chance to understand and apply Linux and Virtualization concepts as well as utilize modern network monitoring tools to enhance IT services.

7245 IT Support Capstone

IT SUPP CAP

IT Support Capstone students will acquire the skills and knowledge needed to provide tier 1 technical support services. The student will learn troubleshooting and problem solving in working with end users using various digital tools such as helpdesk software, knowledge bases, ticket management systems, and other tier 1 computer related support services. Students will also learn to implement, administer, and troubleshoot Information Systems using the Microsoft Windows clients and servers in an enterprise environment. Students will be introduced to managing

applications, files, folders, and devices in a Windows active directory environment. Additionally students have the chance to understand and apply Linux and Virtualization concepts.

Networking

7182 Networking Fundamentals

NTWK FUN

Networking Fundamentals describes, explores, and demonstrates how a network operates in our everyday lives. The course covers the technical pieces and parts of a network and also societal implications such as security and data integrity. Using hands-on lab work, this course offers students the critical information needed for a role as an Information Technology professional who supports computer networks. Concepts covered include the TCP/IP model, OS administration, designing a network topology, configuring the TCP/IP protocols, managing network devices and clients, configuring routers and switches, wireless technology and troubleshooting. Provides students the ability to implement, administer, and troubleshoot information systems that incorporate Microsoft Windows clients and servers in an enterprise environment. Students will be introduced to managing applications, files, folders, and devices in a windows active directory environment.

7251 Networking Capstone

NETWK CAP

The Networking Capstone course is designed as a dual purpose course to provide students with the necessary skills to learn and apply fundamental concepts through project-based exercises. Students will be introduced to managing applications, files, folders, and devices in a window active directory environment. The Networking Capstone provide students with the ability to implement, administrer, and troubleshoot information systems that incorporate the Linux operating system, Microsoft Windows clients, and servers in an enterprise environment, as well as application programming interfaces (API) and configuration management tools enable network automation. This course includes activities using Packet Tracer, hands-on lab work, and a wide array of assesment types and tools. Students can use this course as preparation leading into the Implementing and Administering Cisco Solutions Cisco Certified Network Associate (CCNAv1.0) Certification, 200-301.

Software Development

7185 Website and Database Development

WEB DATA DEV

Website and Database Development will provide students a basic understanding of the essential Web and Database skills and business practices that directly relate to Internet technologies used in Web site and Database design and development. Students will learn to develop Web sites using

Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS). Additionally, students will be introduced to the basic concepts of databases including types of databases, general database environments, database design, normalization and development of tables, queries, reports, and applications. Students will be familiarized with the use of ANSI Standard Structured Query Language. Students will be introduced to data concepts such as data warehousing, data mining, and BIG Data. Students will develop a business application using database software such as Microsoft Access.

7184 Software Development

SOFT DEV

Software Development introduces students to concepts and practices of programming languages and software development. Students are introduced to algorithms and development tools used to document/implement computer logic. Discusses the history of software development, the different types of programming such as real time processing, web/database applications, and different program development environments. Concepts will be applied using different programming languages, and students will develop and test working programs in an integrated system.

7253 Software Development Capstone

SW DEV CAP

The Software Development Capstone provides students with basic programming concepts such as sequence, iteration and decision structures, variables and constants, and functions and advances concepts such as searches, sorts, collections, dictionaries, arrays, and linked lists. This course focuses on logical program design using a modular approach involving task-oriented program functions such as methods, attributes, inheritance, exception handling, and polymorphism. Students will develop a basic understanding of the fundamental concepts involved when using the Java programming development language. This capstone course also provides fundamental and advanced concepts of the Python programming language. Students are required to demonstrate course objectives through the appropriate Oracle Java Certification exam preparation materials. This course covers topics in C++ programming language with an emphasis on classes, advanced debugging techniques, pointers, dynamic memory allocation, and data allocation. Students will be introduced to object-oriented design and programming concepts using C++ language features. The Software Development Capstone course provides an understanding of fundamental and advanced concepts of the C# programming language. The course emphasis will be on creating industry standard programs using current programming design software.

Education

5415 Exploring Education Professions

EX ED

Exploring Education Professions is for students interested in a career in (or exploring possibilities in) education. This course is an introduction to the education field and does not have prerequisites. Exploring Education Professions includes the history of education, an introduction to education professions, qualities and responsibilities of effective teachers, and student evaluation of aptitudes. The course will include exploration of early childhood, elementary, and secondary fields. A project-based approach that utilizes higher order thinking, communication, leadership, management, and fundamentals to college and career success is recommended. Direct, concrete mathematics and language arts proficiencies will be applied. Service learning, introductory laboratory/field experiences in a variety of education settings, and other authentic applications are strongly recommended. This course provides a foundation for continuing and postsecondary education in all career areas related to children, child development, and nurturing of children.

5976 Education and Training: Special Topics

ET ST

Education and Training: Special Topics is an extended learning experience designed to address the advancement and specialization of careers within the career cluster through the provision of a specialized course for a specific workforce need in the school's region. The learning experience is at a qualified site, and is designed to give the student the opportunity to practice technical skills previously learned in the classroom while working under the direction of the appropriately licensed professional. Throughout the course, students will focus on learning about employment opportunities at a variety of entry levels, an overview of the career cluster, teams, and legal and ethical considerations; and obtaining the knowledge, skills and attitudes essential for success in specific occupations. Course standards and curriculum must be tailored to the specific profession, preparing students to advance in this career field, and where applicable, provide students with opportunities for certification or dual credit. This course also provides students with the knowledge, attitudes, and skills needed to make the transition from high school, to postsecondary opportunities, and to work in a variety of careers. Students are encouraged to focus on self-analysis to aid in their career selection. Job seeking and job maintenance skills, personal management skills, and completion of the application process for admission into a postsecondary program are also areas of focus. Participation in a related CTSO encourages the development of leadership, communication and career related skills, and opportunities for community service.

6140 Advanced Career & Technical Education, College Credit: Education and Training

ADV CTE CC ET

Advanced Career and Technical Education, College Credit is a course title covering any CTE advanced course offered for credit by an accredited postsecondary institution through an adjunct

agreement with a secondary school. The intent of this course is to allow students to earn college credit for courses with content that goes beyond that currently approved for high school credit. This course may be used for any dual enrollment course, including a joint program of study involving a postsecondary partnership.

Early Childhood

7160 Principles of Early Childhood Education

PRIN EAR CH ED

This course provides students with an overview of skills and strategies necessary to successfully complete a certificate. Additionally, it provides an overview of the history, theory, and foundations of early childhood education as well as exposure to types of programs, curricula and services available to young children. This course also examines basic principles of child development, Developmentally Appropriate Practices (DAP), importance of family, licensing, and elements of quality care of young children with an emphasis on the learning environment related to health, safety, and nutrition. Students may be required to complete observations and field experiences with children as part of this course.

7158 Early Childhood Education Curriculum

EAR CHD ED CUR

Early Childhood Education Curriculum examines developmentally appropriate environments and activities in various childcare settings while exploring the varying developmental levels and cultural backgrounds of children. Students may be required to complete observations and field experiences with children as part of this course.

7159 Early Childhood Education Guidance

EAR CHD ED GD

This course allows students to analyze developmentally appropriate guidance, theory and implementation for various early care and education settings. It also provides a basic understanding of the anti-bias/multicultural emphasis in the field of early childhood. Students may be required to complete observations and field experiences with children as part of this course.

7259 Early Childhood Education Capstone

ERLY CHILD CAP

This course will prepare students to complete the application, CDA exam, and verification process for the Child Development Associate (CDA) credential. Students may also study the physical, social, emotional, cognitive, and moral development of children from conception to age twelve.

Theories of child development, biological and environmental foundations, prenatal development, the birth process, and the newborn baby will be discussed. Additionally, students will explore the aspects of early literacy skill development in young children from birth through third grade. Students will explore techniques, technological tools and other learning opportunities that encourage positive attitudes in children regarding listening, speaking, reading and writing activities. In the course, students will research, examine and explore the use of observation in screening and assessment to promote healthy literacy development in early childhood education. Finally, students will be provided an introduction to caring for each exceptional child. This includes theories and practices for producing optimal developmental growth. Students may be required to complete observations and field experiences with children as part of this course.

Education Careers

7161 Principles of Teaching

PRIN TEACH

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.**

7157 Child and Adolescent Development

CHLD ADL DEV

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.

7162 Teaching and Learning

TEACH LRN

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.

7267 Education Professions Capstone

ED PROF CAP

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 the 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.

Energy & Natural Resources

5614 Introduction to the Energy Industry

INTRO ENG IND

Introduction to the Energy Industry provides students with an understanding of the occupations in the energy industry and the education and training to enter and advance in careers in the field. Students will explore all aspects of the energy industry including nuclear, natural gas and renewable energy. Schools certified through the Center for Energy Workforce Development (CEWD) can offer their students the opportunity to earn the Energy Industry Fundamentals Certificate.

6126 Advanced Career & Technical Education, College Credit: Energy and Natural Resources

ADV CTE CC

Advanced Career and Technical Education, College Credit is a course covering any CTE advanced course offered for credit by an accredited postsecondary institution through an adjunct agreement with a secondary school. The intent of this course is to allow students to earn college credit for courses with content that goes beyond that currently approved for high school credit. This course may be used for any dual enrollment course, including a joint program of study involving a postsecondary partnership.

Energy Technology

7203 Principles of Energy Technology

PRIN ENER TECH

Principles of Energy Technology provides an overview of the electric and natural gas utility industry as well as the energy generation, transmission, and distribution infrastructure (commonly called the “largest machine in the world”), which forms the backbone of modern industry. The course covers topics such as business models, regulations, types of energy (and their conversion to useable energy such as electric power), how generated power is transmitted and distributed to the point of use, emerging technologies, and the connection to careers in the energy industry. Students are given instruction on workplace safety and other related topics including: Material Safety Data Sheets (MSDS), procedures for working in confined spaces, lock out/tag out, zero energy state, hazardous materials, storage of flammable materials, storage of fuel gas and high pressure gas cylinders, portable powered tool safety, hand tool safety, record keeping, training, employer enforcement of safety regulations, and right to know.

7200 Fundamentals of Electricity and Motors

FUN ELE MOTR

Fundamentals of Electricity and Motors introduces students to the basic electrical laws and principles pertaining to DC and AC circuits and provides a general understanding of the common types of electric motors. Electricity topics include current, voltage, resistance, power, inductance, capacitance, and transformers. The course stresses the use of standard electrical tests, electrical equipment, and troubleshooting procedures. Topics covered include electrical motor theory, magnetism and how it affects motor rotation, motor starting components, and protective devices for motor circuits. Heat dissipation from a motor, motor slippage, how motors are wired to obtain different speeds, and how capacitors affect a motor circuit are also covered. Safety procedures and practices are emphasized.

7198 Electrical Power Distribution

ELC PWR DIS

Electrical Power Distribution provides an introduction to the electrical grid and power distribution. It will cover the history of the current electrical grid and the future of the smart grid, basic electrical concepts, power generation, transmission, distribution, system operations, electrical market structures, regulation, restructuring, market dynamics, and most aspects of the electricity business. This course answers the questions of who creates the power we use, how it's distributed throughout the electrical grid, who determines the cost of electricity, and who controls the entire electrical infrastructure. Students will also study the principles and components required for the transmission and distribution of electric power.

7268 Electrical Line Capstone

ELEC LN CAP

The Electrical Line Capstone builds upon the knowledge and skills developed in the Principles of Energy Technology, Fundamentals of Electricity and Motors, and Electrical Power Distribution courses by developing advanced skills that students can apply to the field. Students enrolled in this course will participate in instruction and lab activities that covers aspects proper care of climbing tools, and the mastering of climbing wood pole structures, electrical principles required for installation, maintenance and troubleshooting of power lines, rigging gear inspection, safe rigging procedures and load control, using almost any vertical or horizontal rigging system. Upon successful completion of this course, the student will be qualified in two methods of pole top rescue.

7269 Industrial Wind Capstone

IND WIND CAP

The Industrial Wind Capstone builds upon the knowledge and skills developed in the Principles of Energy Technology, Fundamentals of Electricity and Motors, and Electrical Power Distribution courses by developing advanced skills that students can apply to the field. Students enrolled in this course will participate in instruction and lab activities that covers aspects of site selection, topographic map reading, meteorology, wind turbine construction, wind power system components, and wind turbine safety. This course will cover general wind turbine systems and operations including troubleshooting for the mechanical, hydraulic, and electrical systems as well as the interaction of wind turbine systems with technologies. Upon completion of this course students will be able to earn the Small Wind Installer - Level 1 (SWI1) certification.

7266 Natural Gas Capstone

NATL GAS CAP

The Natural Gas Capstone builds upon the knowledge and skills developed in the Principles of Energy Technology, Fundamentals of Electricity and Motors, and Electrical Power Distribution courses by developing advanced skills that students can apply to the field. Students enrolled in this course will participate in instruction and lab activities involving the health, safety and environmental hazards and federal regulations surrounding natural gas. Students will participate in activities that cover the types of natural gas pipeline materials, joining techniques, and coating maintenance. Students will also be engaged in activities that cover methods used to locate and install natural gas lines, basic design theory, backfilling, purging, valve inspection and maintenance, pressure testing, customer regulations and relief design, explanation of hoop stress, shutting down the flow of gas, basic tapping and stopping techniques, construction equipment and current methods and common materials. As a capstone course, students should have the opportunity to apply their knowledge and use skills through an intensive work-based learning experience.

7365 Renewable Energy Alternatives Capstone

RE ENGY ALT CAP

The Renewable Energy Alternative Capstone builds upon the knowledge and skills developed in the Principles of Energy Technology, Fundamentals of Electricity and Motors, and Electrical Power Distribution courses by developing advanced skills that students can apply in the field. Students enrolled in this course will participate in instruction and lab activities that cover aspects of installation and maintenance of residential and commercial scale solar power and heat, wind power, and geothermal heat systems. Students will participate in activities that cover site selection, topographic map reading, meteorology, wind turbine construction, wind power system components, and wind turbine safety, leading technologies in the solar industry, photovoltaic system safety and PPE requirements, electrical circuits and multimeter practices, PV module function and build, charge controller and inverter operation, battery systems, and PV system wiring and code requirements. Upon completion of this course students will be able to earn the Small

Wind Installer - Level 1 (SWI1) certification and the Photovoltaic Installer – Level I (PVI1) certification.

Natural Resources

5180 Natural Resources

NAT RSS

Natural Resources provides students with a background in environmental science and conservation. Course work includes hands-on learning activities that encourage students to investigate areas of environmental concern. Students are introduced to the following areas of natural resources: soils, the water cycle, air quality, outdoor recreation, forestry, minerals, interrelationships between humans and natural systems, wetlands, wildlife, safety, careers, leadership, and supervised agricultural experience programs.

7270 Forestry and Wildlife Management

FOR WILF MGMT

Forestry and Wildlife Management provides students with opportunities to participate in a variety of activities including laboratory work. Students will explore concepts related to environmental and ecological impacts, forestry management, timber harvesting, tree production, and wood utilization, as well as environmental issues and career exploration.

7271 Soil and Water Management

SOIL WATR MGMT

Soil and Water Management provides students with opportunities to participate in a variety of activities including laboratory work. Students will explore concepts related to geological information system mapping (GIS), soil and land use, water and aquatic ecology, as well as environmental issues and career exploration.

5229 Sustainable Energy Alternatives

SUS NRG

Sustainable Energy Alternatives broadens a student's understanding of environmentally-friendly energies. In this course students will use a combination of classroom, laboratory, and field experiences to analyze, critique, and design alternative energy systems. Class content and activities center on renewability and sustainability for our planet. Topics covered in this course include the following types of alternative energies: solar, wind, geothermal, biomass, and other emerging technologies. Leadership development, supervised agricultural experiences, and career exploration opportunities are explored in this course.

Financial Services

Accounting

4522 Advanced Accounting

ADV ACC

Advanced Accounting expands on the Generally Accepted Accounting Principles (GAAP) and procedures for various forms of business ownership using double-entry accounting covered in Accounting Fundamentals, including an emphasis on payroll accounting. Topics covered include calculating gross pay, withholdings, net pay, direct deposits, journalizing payroll transactions and preparing individual earnings records and payroll registers. Emphasis is placed on applying Generally Accepted Accounting Principles through hands-on practice with popular commercial accounting software packages that are currently used in business.

7252 Accounting Capstone

ACCT CAP

The Accounting Capstone course emphasizes Managerial Accounting concepts and Income Tax Accounting for individuals and sole proprietorships. Topics include general versus cost accounting systems, cost behavior, cost-volume profit analysis, budgeting, standard cost systems, responsibility accounting, incremental analysis, and capital investment analysis. Offers an overview of federal and state income tax law for individuals including taxable income, capital gains and losses, adjustments, standard and itemized deductions, tax credits and appropriate tax forms. When offered for multiple credits per semester, the Accounting Capstone may be used to provide students the opportunity to participate in an intensive WBL experience and/or to complete additional coursework in using spreadsheets to solve accounting cases and to complete a postsecondary credential from ITCC or VU.

Finance and Investment

7150 Personal Finance and Banking

PERSON FIN/BNK

Personal Finance and Banking emphasizes management of individual financial resources for growth and maintenance of personal wealth. Covers home buying and mortgage financing, installment financing, life and health insurance, securities, commodities and other investment opportunities. Students will gain an overview of the banking industry and the financial services provided by banks for individuals and businesses.

5258 Finance and Investment

FIN INVEST

Finance and Investments addresses the need of schools in areas that have workforce demand in the finance industry. It analyzes and synthesizes high-level skills needed for a multitude of careers in the banking and investment industry. Students learn banking, investments, and other finance fundamentals and applications related to financial institutions, business and personal financial services, investment and securities, risk management products, and corporate finance.

7265 Finance and Investment Capstone

FIN CAP

The Finance and Investment Capstone course includes content on credit and collections, real estate, business law and investing.

Insurance

7149 Insurance Fundamentals

INS FUN

Insurance Fundamentals presents an introduction to professions within the insurance industry. The course includes an overview of the insurance industry, types of coverage that exist, insurance processes and expected outcomes. Students will also gain an understanding of the selling process including the psychology of selling and will develop skills through a series of selling situations.

7151 Personal and Commercial Insurance

PER PROP INS

Personal and Commercial Insurance provides an understanding of the basic principles of personal and property and liability insurance. Students will analyze personal loss exposures and insurance including homeowners and other dwelling coverages, personal liability, inland marine, auto, life, health insurance, and financial planning. Students will also explore commercial coverages including general liability and workers compensation.

Health & Human Services

5272 Introduction to Health Science Careers

INTRO HS CAREERS

Introduction to Health Science Careers is an exploratory course designed to provide students with an opportunity to investigate all aspects of the health science industry. Students will receive an introduction to healthcare systems and examine a variety of pathways in health science, and reflect on their own knowledge, skills, and interests, to begin to narrow the areas within health science they want to continue exploring, in preparation for further study in a health science principles course.

5286 Health & Human Services: Special Topics

HHS ST

Health & Human Services: Special Topics is designed to address the advancement and specialization of healthcare and/or human services careers through the provision of a specialized course for a specific healthcare or human services workforce need in the school's region. Throughout the course students will build their essential job related skills for providing basic care appropriate for their career setting and audience. Course standards and curriculum must be tailored to the specific profession, preparing students to advance in this career field, and where applicable, provide students with opportunities for certification or dual credit. This course also provides students with the knowledge, attitudes, and skills needed to make the transition from high school to postsecondary opportunities, and to work in a variety of health science or human services careers. Students are encouraged to focus on self-analysis to aid in their career selection. Job seeking and job maintenance skills, personal management skills, and completion of the application process for admission into a postsecondary program are also areas of focus.

6138 Advanced Career & Technical Education, College Credit: Health and Human Services

ADV CTE CC HSCI

Advanced Career and Technical Education, College Credit is a course title covering any CTE advanced course offered for credit by an accredited postsecondary institution through an adjunct agreement with a secondary school. The intent of this course is to allow students to earn college credit for courses with content that goes beyond that currently approved for high school credit. This course may be used for any dual enrollment course, including a joint program of study involving a postsecondary partnership.

5276 Anatomy and Physiology

A & P

Anatomy & Physiology is a course in which students investigate concepts related to Health Science, with emphasis on interdependence of systems and contributions of each system to the maintenance of a healthy body. It introduces students to the cell, which is the basic structural and functional unit of all organisms, and covers tissues, integument, skeletal, muscular and nervous systems as an integrated unit. Through instruction, including laboratory activities, students apply concepts associated with Human Anatomy & Physiology. Students will understand the structure, organization and function of the various components of the healthy body in order to apply this knowledge in all health related fields.

Biomedical Sciences

5218 Principles of Biomedical Sciences

PRIN BIOMED

Principles of Biomedical Sciences provides an introduction to this field through "hands-on" projects and problems. Student work involves the study of human medicine, research processes, and an introduction to bioinformatics. Students investigate the human body systems and various health conditions including heart disease, diabetes, hypercholesterolemia, and infectious diseases. A theme through the course is determining factors that led to the death of a fictional person. After determining the factors responsible for the death, the students investigate lifestyle choices and medical treatments that might have prolonged the person's life. Key biological concepts included in the curriculum are: homeostasis, metabolism, inheritance of traits, feedback systems, and defense against disease. Engineering principles such as the design process, feedback loops, fluid dynamics, and the relationship of structure to function will be included where appropriate. The course is designed to provide an overview of all courses in the Biomedical Sciences program and to lay the scientific foundation necessary for student success in the subsequent courses.

NOTE: This course aligns with the PLTW Principles of Biomedical Sciences curriculum. Use of the PLTW Curriculum may require additional training and membership in the PLTW network.

5216 Human Body Systems (L)

HUMAN SYST

Human Body Systems is a course designed to engage students in the study of basic human physiology and the care and maintenance required to support the complex systems. Using a focus on human health, students will employ a variety of monitors to examine body systems (respiratory, circulatory, and nervous) at rest and under stress, and observe the interactions between the various body systems. Students will use appropriate software to design and build systems to monitor body functions.

NOTE: This course aligns with the PLTW Human Body Systems curriculum. Use of the PLTW Curriculum may require additional training and membership in the PLTW network.

5217 Medical Interventions (L)

MED INTERV

Medical Interventions is a course that studies medical practices, including interventions, to support humans in treating disease and maintaining health. Using a project-based learning approach, students will investigate various medical interventions that extend and improve quality of life, including gene therapy, pharmacology, surgery, prosthetics, rehabilitation, and supportive care. Students will also study the design and development of various interventions. Lessons will cover the history of organ transplants and gene therapy with additional readings from current scientific literature addressing cutting edge developments.

NOTE: This course aligns with the PLTW Medical Interventions curriculum. Use of the PLTW Curriculum may require additional training and membership in the PLTW network.

5219 Biomedical Innovations (L)

BIO INN

Biomedical Innovations is a capstone course designed to give students the opportunity to design innovative solutions for the health challenges of the 21st century as they work through progressively challenging open-ended problems, addressing topics such as clinical medicine, physiology, biomedical engineering, and public health. Students have the opportunity to work on an independent project and may work with a mentor or advisor from a healthcare or postsecondary industry. Throughout the course, students are expected to present their work to an adult audience that may include representatives from the local business and healthcare community.

NOTE: This course aligns with the PLTW Biomedical Innovations curriculum. Use of the PLTW Curriculum may require additional training and membership in the PLTW network.

Central Service Technician

7163 Central Service Technician Fundamentals

CEN SER TEC FUN

The Central Service Technician Fundamentals course introduces students to the field of central service and prepares students to identify surgical instruments by category, type, and use. Students will learn the principles and importance of the flow of material along with the environmental control factors affecting the central service department. The student will differentiate between equipment management systems and compare out-sourcing and insourcing.

7257 Central Service Technician Capstone

CENT SRV TECH CAP

The Central Services Technician Capstone course emphasizes the practice of sterilization skills that have been learned in previous courses. Students will focus on high and low sterilization methods. Students will differentiate between the various sterilization methods. Students will learn the protocol for controlling infection and the spread of blood borne pathogens. Additionally, this course will provide students the opportunity to complete practical hours toward the hours required for the completion of the International Association of Healthcare Central Services Material Management Certification Exam.

Cosmetology and Barbering

7330 Principles of Barbering and Cosmetology

PRIN COSMO

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, bacteriology, and sanitation. Successful completion of the course requires at least 375 Cosmetology studio hours.

7331 Barbering and Cosmetology Fundamentals

COSMO FUND

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.

7332 Advanced Cosmetology

ADV COSMO

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.

7333 Advanced Barbering

ADV BARB

Advanced Barbering is a course with a particular focus on barbering styles and techniques. The emphasis will be toward the development of advanced skills in styling, hair coloring, permanent waving, facials and facial hair care. Students will also study anatomy and physiology as it applies to cosmetology. Upon completion of the course requirements, the students will be able to Perform basic manipulative skills including haircutting, hairstyling, perming, shaving, treatment of the skin and scalp, salon management, license laws, sanitation and retain knowledge relating to the history of barbering. Successful completion of the course requires at least 375 Cosmetology studio hours.

7334 Barbering and Cosmetology Capstone

COSMO CAP

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 examination are stressed. Successful completion of the course requires at least 375 studio hours.

Dental Careers

7315 Principles of Dental Careers

PRIN DENT CAR

Principles of Dental Careers will provide the foundational knowledge and skills necessary to pursue a career in the dental field. A focus will be placed on the role of the modern dental assistant and will cover key pre-clinical procedures and beginning dental terminology.

7316 Dental Careers Fundamentals

DENT CAR FUND

Dental Careers Fundamentals will build upon the knowledge and skills in the principles course. Students will understand and practice beginning chairside functions of the dental assistant along with a focus on the anatomy and physiology of the head, neck, and oral cavity. Students will also study tooth anatomy, physiology, and morphology. This part of the program will prepare students for the Anatomy, Morphology, and Physiology exam of the NELDA certification.

7317 Advanced Dental Careers

ADV DENT CAR

Advanced Dental Careers will build upon the knowledge and skills developed in the first two courses. Students will study more advanced chairside assisting functions along with advanced infection control techniques. Additionally, students will explore preventive dentistry practices and dental emergencies. This course will prepare students for the ICE exam of the NELDA certification.

7318 Dental Careers Capstone

DENT CAR CAP

Dental Careers Capstone will provide the opportunity for increased skill development in clinical support through work-based learning experiences. Students will also prepare for Radiation, Health, and Safety which is third and final part of the NELDA certification. The capstone course may also provide the opportunity to review and prepare for the entire NELDA certification.

Exercise Science/Physical Therapy

7320 Principles of Exercise Science

PRIN EXER SCI

Principles of Exercise Science provides an introduction to the science of exercise and human movement. Special topics include exercise physiology, sport biomechanics, sports medicine, and motor integration. Additionally, the course will examine career options in sport, health and wellness, education, and the medical fields such as personal training, athletic training, and physical therapy.

7321 Kinesiology

KINESIO

Kinesiology students will study fundamental concepts concerning the interaction of biological and mechanical aspects of the musculoskeletal and neuromuscular structures. An emphasis on practical applications of the concepts will be accomplished through an introduction to fitness training methods and modalities for developing specific conditioning effects in individuals. Laboratory sessions focus on anatomy and physiology of the musculoskeletal and cardiovascular systems, theories on fitness programming, and injury avoidance in fitness environments.

7322 Human Performance

HUM PERF

Students in Human Performance will learn basic human physiology relating to exercise and how the body adapts to acute and chronic physical activity. Systems covered include cellular metabolic processes, energy systems, and the effects of exercise on the respiratory, nervous, cardiovascular, endocrine, skeletal, and muscular systems. The course will also study the basic nutritional principles needed for optimal athletic and human performance.

7323 Physical Therapy Capstone

PHYS THER CAP

The Physical Therapy Capstone course is designed to provide students the opportunity to explore the role of a physical therapy assistant and to practice technical skills previously learned in the classroom. It prepares students 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 physical therapists. In addition, students will learn skills specific to physical therapy including observing patients' progress, helping patients do specific exercises, using massage and stretching for treatment, aiding patients with devices for movement, educating patients and families, and basic assisting in cleaning treatment areas and clerical work.

7324 Fitness Management Capstone

FIT MGMT CAP

The Fitness Management Capstone course will focus on the knowledge and skills needed to be a personal trainer. This course will focus on the fundamental concepts in personal training for healthy general populations including topics of group fitness instruction and the principles and skills involved in management within the the health and fitness industry.

Pharmacy

7137 Principles of Pharmacy Tech

PRIN PHARM

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.

7167 Pharmacy Tech

PHARM TECH

The Pharmacy Technician course introduces the student to the hands-on foundational principles, career concepts, and entry-level skills and duties typically performed by a pharmacy technician in community/retail, hospital/health system, and other pharmacy practice settings before actual on-site experiental training. Students will see computerized applications of prescription data entry, record keeping, and hands-on experience with drug distribution systems. Classroom and lab activities will provide opportunities for students to learn both administrative and clinical procedures such as filling prescriptions and compounding medications. This course will also provide hands-on instructrion in the principles and preparations of sterile compounding and aseptic technique for compounded sterile products in a simulated lab setting. This includes experiences in mixing products under a laminar flow hood, practicing proper technique, and using proper supplies and equipment.

7310 Pharmacy Capstone

PHARM TECH CAP

The Pharmacy Capstone courses builds upon the foundational knowledge learned in the Pharmacy Tech course. In addition to advanced pharmacology and dispensing labs, students will also explore Pharmacy law and ethics, management, and advanced pharmacology. Time is built into the capstone course to allow students to complete their practicum as well.

Pre-Nursing / Healthcare Specialist

7168 Principles of Healthcare

PRIN HLCR

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.

5274 Healthcare Fundamentals

HEALTH FUND

Healthcare Fundamentals 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. Introduces cells, tissues, and human anatomy highlighting essential physiological principles through a systemic approach. Additionally, the course provides a general overview of basic concepts and terminology used in anatomy and physiology as applicable to

health sciences and healthcare occupations. 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.

7166 Healthcare Specialist: CNA

HC SPEC 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.

7164 Certified Clinical Medical Assistant (CCMA)

CERT CL MED AST

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.

7165 Emergency Medical Tech

EMT

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.

7255 Healthcare Specialist Capstone

HC SPEC CAP

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.

Social and Community Services

7176 Principles of Human Services

PRIN HUM SERV

Principles of Human Services explores the history of human services, career opportunities, and the role of the human service worker. Focuses on the needs of various populations and the resources available to meet their needs. The course includes a required job shadowing project in a Human Services setting (a suggested four-hour minimum to meet Ivy Tech requirements). This course will also encourage cultural awareness and appreciation of diversity. Focuses on cultural variations in attitudes, values, language, gestures, and customs.

7276 Fundamentals of Human Services

FUN HUMS

Fundamentals of Human Services examines key elements of effective delivery of human services. Topics of discussion include personal values, helping relationships, the impact of diversity, theories of helping, communication, problem-solving processes, crisis situations, abuse, and professional ethics. This course also provides training for identifying characteristics of a crisis and basic crisis intervention skills. Students will evaluate their own personal strengths and limitations and discuss the importance of professional development for the human services social worker.

7278 Advanced Social and Community Services

COM HLTH WK

Advanced Social and Community Services provides students with the opportunity to increase their effectiveness in helping people. Students will examine the helping process in terms of skill, helping

stages, and issues involved in a helping relationship. Additionally, background knowledge of the field of intellectual and developmental disabilities and issues pertaining to the field will be provided.

7279 Social and Community Services Capstone

SOC COMM CAPST

This course offers a comprehensive overview of addiction, emphasizing the effects of various substances on the brain and body. Students will examine commonly abused drugs, including their origins, composition, therapeutic uses, and toxicology, as well as their impact on individuals, families, and society. Throughout the course students will be introduced to and develop basic interviewing skills, assessment strategies, and treatment planning. The course explores the symptoms and effects of substance abuse and dependence. After satisfactory completion of this course, students will have met the requirements to be a Certified Community Health Worker in Indiana through the Indiana Community Health Workers Association. A Community Health Worker is a frontline worker trained in care coordination, case management, coaching, and cultural competency. Through this advanced level elective course focusing on theories of behavior modification, students will develop an understanding of terms and practical applications of theoretical approaches used in working with people.

Hospitality, Events, & Tourism

5438 Introduction to Hospitality, Events, & Tourism

INTRO HOSP

Introduction to Hospitality, Events, & Tourism is recommended for all students regardless of their career cluster or pathway, in order to build basic knowledge and skills. It is especially appropriate for students with an interest in careers related to Hospitality, Events, and Tourism. A project-based approach that utilizes higher order thinking, communication, leadership, and management processes is recommended. Topics include basic culinary skills in the foodservice industry, safety and sanitation, nutrition, customer relations and career investigation. Students are able to explore this industry and examine their own career goals in light of their findings. Laboratory experiences that emphasize industry practices and develop basic skills are required components of this course.

6120 Advanced Career & Technical Education, College Credit: Hospitality, Events, & Tourism

ADV CTE CC HOSP

Advanced Career and Technical Education, College Credit is a course title covering any CTE advanced course offered for credit by an accredited postsecondary institution through an adjunct agreement with a secondary school. The intent of this course is to allow students to earn college credit for courses with content that goes beyond that currently approved for high school credit. This course may be used for any dual enrollment course, including a joint program of study involving a postsecondary partnership.

6152 Hospitality, Events, and Tourism: Special Topics

HOSP ST

Hospitality, Events, and Tourism: Special Topics is an extended learning experience designed to address the advancement and specialization of careers within the career cluster through the provision of a specialized course for a specific workforce need in the school's region. The learning experience is at a qualified site, and is designed to give the student the opportunity to learn and practice technical skills while working under the direction of the appropriately licensed professional. Throughout the course, students will focus on learning about employment opportunities and obtaining the knowledge, skills and attitudes essential for success in specific occupations. Course standards and curriculum must be tailored to the specific profession, preparing students to advance in this career field, and where applicable, provide students with opportunities for certification or dual credit. Participation in a related CTSO encourages the development of leadership, communication and career related skills, and opportunities for community service.

Culinary Arts

7173 Principles of Culinary and Hospitality

PRIN HOSP

Principles of Culinary and Hospitality is designed to develop an understanding of the hospitality industry and career opportunities, and responsibilities in the food service and lodging industry. Introduces procedures for decision making which affects operation management, products, labor, and revenue. Additionally, students will learn the fundamentals of food preparation, basic principles of sanitation, service procedures, and safety practices in the food service industry including proper operation techniques for equipment.

7171 Nutrition

NUTR

Nutrition students will learn the characteristics, functions and food sources of the major nutrient groups and how to maximize nutrient retention in food preparation and storage. Students will be made aware of nutrient needs throughout the life cycle and to apply those principles to menu planning and food preparation. This course will engage students in hands-on learning of nutritional concepts such as preparing nutrient dense meals or examining nutritional needs of student athletes

7169 Culinary Arts

CUL ARTS

Culinary Arts teaches students how to prepare the four major stocks, the five mother sauces (in addition to smaller sauces) and various soups. Additional emphasis is placed on the further development of the classical cooking methods. This course will also present the fundamentals of baking science including terminology, ingredients, weights and measures, and proper use and care of equipment. Students will produce yeast goods, pies, cakes, cookies, and quick breads.

7235 Baking and Pastry Capstone

BAKE PSTRY CAP

The objective of this course is to help students understand the science of baking and the different reactions that take place based on the ingredients, temperatures, and equipment in relation to the final product. The course requires students to produce and finish a variety of cakes. The course emphasizes application techniques, color coordination, and the flavor and texture of fillings. Students will practice the techniques of basic cake decorating.This course will also address classical French and European desserts, including the preparation of goods such as Napoleons, Gateau St. Honoré, petit fours and petit fours sec, ganaches, pastry creams and fillings, sauces, flans and tarts, and European sponges. The course also includes instruction in tempering of

chocolates, molding, and chocolate plastique, preparation of truffles, pastillage and marzipan, short doughs, and meringues. The student will be instructed in the latest preparation methods, innovative ideas for impressive plate presentations, and techniques that utilize specialized equipment and tools to make high-tech, novel creations.

7233 Culinary Capstone

CUL ARTS CAP

This course covers the techniques and skills needed in breakfast cookery as well as insight into the pantry department. Various methods of preparation of eggs, pancakes, waffles and cereals will be discussed. Students will receive instruction in salad preparation, salad dressing, hot and cold sandwich preparation, garnishes and appetizers. This course also covers the necessary skills for proper recruiting, staffing, training, and management of employees at various levels. The course will help prepare the student for the transition from employee to supervisor. Additionally, it will help the student evaluate styles of leadership and develop skills in human relations and personnel management.

Hospitality Management

7172 Hospitality Management

HOSP MAN

Hospitality Management prepares students for employment in the hospitality industry. It provides the foundations for study in higher education that leads to a full spectrum of hospitality careers. This is a broad-based course that introduces students to all segments of hospitality, what it includes, and career opportunities that are available; provides a survey of management functions, highlighting basic theories and facts; and exposes students to current trends and current events within the industry. Three major goals of this course are for students to be able to identify current trends in hotel and restaurant management, distinguish the difference between hospitality and tourism, and state differences in front of the house versus back of the house.

7237 Hospitality Management Capstone

HOSP MGMT CAP

This course presents the essentials of effective food and beverage control while establishing systems for sale values of food and beverages that are outlined. This course addresses the application of the four-step control process to the primary phases of foodservice operations: purchasing, receiving, storing, issuing and production. Labor costs and sales forecasting are analyzed. This course also provides an opportunity for Intermediate Hospitality students to acquire valuable field experience by working under the supervision of a Hospitality Manager. The students will keep a journal and prepare a report on their experiences at the end of the course.

Nutrition Science

7170 Nutrition Planning and Therapy

NUTR PL TRPY

This course presents the basic principles of nutrition; the role nutrients play in maintaining good health as well as their effect on certain disease states. Students will learn to modify diets to meet various nutritional needs and to plan menus using modified diet principles. This course teaches students to develop an in-depth understanding of the principles of diet therapy. Students will learn to assess patients' nutritional needs, develop care plans, and implement a delivery system. Students will also learn documentation skills required by Centers for Medicare and Medicaid Services (CMS).

7239 Nutrition Science Capstone

NUT SCI CAP

This course offers practical experience in a health care facility monitored by a Registered Dietician in order to build specialized skills. This work-based experience provides an opportunity for students to transfer their academic preparation into actual work-based learning by acquiring "real world" skills and building ties with the healthcare community. Student must complete 150 hours of field experience. (Students should have a site in mind prior to registering for this course--coordinator will assist.)

Marketing, Sales, & Entrepreneurship

5966 Entrepreneurship and New Ventures Capstone

ENT VENT CAP

Entrepreneurship and New Ventures Capstone introduces entrepreneurship and develops skills and tools critical for starting and succeeding in a new venture. The entrepreneurial process of opportunity recognition, innovation, value proposition, competitive advantage, venture concept, feasibility analysis, and "go to" market strategies will be explored through mini-case studies of successful and unsuccessful entrepreneurial start-ups. Additionally, topics of government and legal restrictions, intellectual property, franchising location, basic business accounting, raising startup funding, sales and revenue forecasting, and business plan development will be presented through extensive use of word processing, spreadsheet and presentation software.

5967 Introduction to Entrepreneurship

INTO ENTR

Introduction to Entrepreneurship provides an overview of what it means to be an entrepreneur. Students will learn about starting and operating a business, marketing products and services, and how to find resources to help in the development of a new venture. This course is ideal for students interested in starting their own art gallery, salon, restaurant, etc.

5968 Business, Marketing and Entrepreneurship: Special Topics

BME ST

Business, Marketing, and Entrepreneurship: Special Topics is an extended learning experience designed to address the advancement and specialization of careers within the career cluster through the provision of a specialized course for a specific workforce need in the school's region. The learning experience is at a qualified site, and is designed to give the student the opportunity to learn and practice technical skills; while working under the direction of the appropriately licensed professional. Throughout the course, students will focus on learning about employment opportunities and obtaining the knowledge, skills and attitudes essential for success in specific occupations. Course standards and curriculum must be tailored to the specific profession, preparing students to advance in this career field, and where applicable, provide students with opportunities for certification or dual credit. Participation in a related CTSO encourages the development of leadership, communication and career related skills, and opportunities for community service.

6142 Advanced Career & Technical Education, College Credit: Business, Marketing, and Entrepreneurship

ADV BUS CC BME

Advanced Career and Technical Education, College Credit is a course title covering any CTE advanced course offered for credit by an accredited postsecondary institution through an adjunct agreement with a secondary school. The intent of this course is to allow students to earn college credit for courses with content that goes beyond that currently approved for high school credit. This course may be used for any dual enrollment course, including a joint program of study involving a postsecondary partnership.

Entrepreneurship

7154 Principles of Entrepreneurship

PRIN ENTR

Principles of Entrepreneurship focuses on students learning about their own strengths, character and skills and how their unique abilities can apply to entrepreneurship, as well as how an entrepreneurial mindset can serve them regardless of their career path. Students will learn about the local, regional and state resources and will begin to understand and apply the entrepreneurial process. The course helps students to identify and evaluate business ideas while learning the steps and competencies required to launch a successful new venture. The course helps students apply what they have learned from the content when they write a Personal Vision Statement, a Business Concept Statement, and an Elevator Pitch.

7148 New Venture Development

NEW VENT

New Venture Development is targeted to students interested in creating and growing their own businesses. The course will focus on key marketing strategies particularly relevant for new ventures including the appropriate business structure and organization, developing plans and strategies for the entrepreneurial venture, financing strategies, exploring growth opportunities, and successfully managing scarce resources. Students will explore buy/sell/lease negotiations, insurance, logistics, and technology use. By the end, students will be well-prepared to tackle the challenges of small business management and entrepreneurship.

7147 Entrepreneurial Operations

ENTR OPER

Entrepreneurial Operations will focus on key marketing strategies particularly relevant to new ventures. Students will develop an understanding of marketing, advertising, social media, and branding. Upon successful completion of this course, the student should be able to identify and

evaluate the various sources available for funding a new enterprise; demonstrate an understanding of financial terminology; read, prepare, and analyze basic financial statements; estimate capital requirements and risk, exit strategies; and prepare a budget for their business. In addition, the student should be able to explain the importance of working capital and cash management. The student should also be able to identify financing needs and prepare sales forecasts.

Marketing and Sales

5914 Marketing Fundamentals

MRKT FUND

Marketing Fundamentals provides a basic introduction to the scope and importance of marketing in the global economy. Course topics include the seven functions of marketing: promotion, channel management, pricing, product/service management, market planning, marketing information management, and professional selling skills. Emphasis is marketing content but will involve use of oral and written communications, mathematical applications, problem-solving, and critical thinking skills through the development of an integrated marketing plan and other projects.

7145 Digital Marketing

DGTL MARK

Digital Marketing provides an introduction to the world of e-commerce and digital marketing media. The course covers how to integrate digital media and e-commerce into organizational and marketing strategy. Students will explore e-commerce applications and the most popular digital marketing tactics and tools. Emphasizes familiarity with executing digital media, understanding the marketing objectives that digital media can help organizations achieve, and establishing and enhancing an organization's digital marketing presence.

5918 Strategic Marketing

STRT MRKT

Strategic Marketing builds upon the foundations of marketing and applies the functions of marketing at an advanced level. Students will study the basic principles of consumer behavior and examine the application of theories from psychology, social psychology, and economics. The relationship between consumer behavior and marketing activities will be reviewed.

Public Service & Safety

6136 Advanced Career & Technical Education, College Credit: Public Service and Safety

ADV CTE CC PS

Advanced Career and Technical Education, College Credit is a course title covering any CTE advanced course offered for credit by an accredited postsecondary institution through an adjunct agreement with a secondary school. The intent of this course is to allow students to earn college credit for courses with content that goes beyond that currently approved for high school credit. This course may be used for any dual enrollment course, including a joint program of study involving a postsecondary partnership.

6154 Public Safety: Special Topics

PS ST

Public Safety: Special Topics is an extended learning experience designed to address the advancement and specialization of careers within the career cluster through the provision of a specialized course for a specific workforce need in the school's region. The learning experience is at a qualified site, and is designed to give the student the opportunity to learn and practice technical skills while working under the direction of an appropriately licensed professional. Throughout the course, students will focus on learning about employment opportunities and obtaining the knowledge, skills, and attitudes essential for success in specific occupations. Course standards and curriculum must be tailored to the specific profession, preparing students to advance in this career field, and where applicable, provide students with opportunities for certification or dual credit. Participation in a related CTSO encourages the development of leadership, communication and career related skills, and opportunities for community service.

7190 Introduction to Law and Public Safety

INTRO LAW PS

Introduction to Law and Public Safety introduces students to a variety of available careers and areas of interest including Fire Science, Criminal Justice, Homeland Security, Environmental Health and Safety, Emergency Medical Services, and Legal Services. The course is designed to help students create a career plan for the public service and safety sectors which includes certification requirements and hiring practices.

Criminal Justice

7193 Principles of Criminal Justice

PRIN CR JUST

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.

7191 Law Enforcement Fundamentals

LAW ENF FUND

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.

7188 Corrections and Cultural Awareness

CRT CORR

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.

7231 Criminal Justice Capstone

CRIM JUST CAP

The Criminal Justice Capstone course allows students to complete additional instruction to earn a postsecondary certificate and should include a work-based learning component such as job shadowing, internship, etc. once the core content is completed.

NOTE: There may be age restrictions on work-based learning components.

Fire and Rescue

7195 Principles of Fire and Rescue

PRIN FIRE RES

Principles of Fire and Rescue introduces students to the various roles that firefighters and emergency services workers play to protect the public from the loss of life and property. They are frequently the first emergency personnel at the scene of a traffic accident or medical emergency and may be called upon to put out a fire, treat injuries or perform other vital functions. This course will introduce students to the history, terminology, and basic firefighting skills needed for a beginning firefighter. Additionally, students will develop a career plan for a career in public safety including areas of Fire Science, Homeland Security, and Emergency Medical Services.

7189 Fire Fighting Fundamentals

FIRE FGHT FUN

Fire Fighting Fundamentals is for those students who are seeking certification as a firefighter. This course will prepare students for the Hazardous Materials Awareness and Operations certifications and will introduce students to NFPA 1001 which serves as the standard of measurement for all firefighters in North America. Students will learn the knowledge and hands-on practical skills for managing and controlling a hazardous materials incident required for the certifications. Furthermore, students will study how a fire behaves and will learn the basic firefighting skills needed to extinguish a fire while protecting themselves and other firefighters.

7186 Advanced Fire Fighting

ADV FIRE FGHT

Advanced Fire Fighting expands upon the principles and techniques of firefighting learned in Fire Fighting Fundamentals. Students will study fire protection systems, firefighter safety, and survival. Students will also learn what fire is, the chemical hazards of combustion, and related by-products of fire. Additionally, students will gain a better understanding of fire department organization, administration, operations, and basic strategies and tactics.

7229 Fire and Rescue Capstone

FIRE RES CAP

Fire and Rescue Capstone will prepare students to earn the EMT certification.

Paralegal

7194 Principles of Paralegal Studies

PRIN PARA ST

Principles of Paralegal Studies introduces the student to a broad understanding of the American legal system. Students will engage with and learn about the various court structures, the key players within the system, and how our rules and laws are made, enforced, interpreted and applied. The course will cover substantive legal topics and provide hands-on learning regarding legal research, legal writing, case briefing, interviewing skills, and profession ethics. This course is designed to improve student's ability to write at a professional levels, with attention to grammar, sentence structure, and style, while also becoming familiar with basic legal terminology.

7192 Paralegal Fundamentals

PARA FUN

Paralegal Fundamentals introduces the student to practical ways to use technology in a law firm such as time keeping, billing, document management, and more. After successful completion of the course, students will earn a certificate from the National Society of Legal Technologist. Additionally, the course will introduce the constitutional law of the United States of America with an emphasis on the decisions of the United States Supreme Course. This course will explore various methodologies of constitutional interpretation and modes of constitutional analysis. Topics inlcude, the history of the Articles of Confederation, the history of the Constitution of the United States, the role of the judiciary, the separation of powers and relations among the federal branches of government, the powers of the national government and federalism based on Congress and the states and individual constitutional rights. The course will include projects which will include writing three (3) case briefs, one (1) memorandum of law and one (1) memorandum of points and authorities.

7187 Advanced Paralegal Studies

ADV PARA ST

Advanced Paralegal Studies provides students the opportunity to learn about how to manage and conduct the work that happens in a law office through a simulated law office environment. Students will learn legal ethics by examination rules of professional conduct that apply to all legal professions including: the American Bar Association Model Rules of Professional Conduct, the Indiana Rules of Professional Conduct, the American Bar Association Guidelines for the Utilization of Legal Assistants; and various other sets of rules of conduct created by paralegal associations.

7227 Paralegal Studies Capstone

LEGAL ST CAP

A core component of Paralegal Studies Capstone is the introduction of legal research resources. Resources can include constitutions, statutory codes and annotations, administrative codes and registers, cases reporters and digests, legal secondary sources, including legal encyclopedias, treatises, legal periodicals, practice manuals, and form books. This course also introduces students to the various finding tools for accessing information in these resources. Instruction covers topics such as proper legal citation form, citation services, and research strategy. Course projects include a series of graded law library research assignments teaching the student how to use this variety of materials to research both primary and secondary legal authorities using methodologies for research in either print or online sources, and updating material to insure the most up-to-date research possible. This course will also include instruction devoted to the study of the Indiana Trial rules, small claims, court rules, and local rules. The Paralegal Studies Capstone course focuses on knowing the Rules of Civil Procedure applicable to each part of a case. Topics include filing requirements, the rules regarding service of process, calculation of deadlines, motion practice, discovery, trials, and relief from judgments.

Supply Chain & Transportation

4798 Introduction to Supply Chain & Transportation

INT TRANS

Introduction to Supply Chain & Transportation is an introductory course designed to help students become familiar with fundamental principles in modes of land, sea, air, and space transportation, including basic mechanical skills and processes involved in transportation of people, cargo, and goods. Students will gain and apply knowledge and skills in the safe application, design, production, and assessment of products, services, and systems as it relates to the transportation industries. Content of this course includes the study of how transportation impacts individuals, society, and the environment. This course allows students to reinforce, apply, and transfer their academic knowledge and skills to a variety of interesting and relevant transportation related activities, problems, and settings.

6128 Advanced Career & Technical Education, College Credit: Supply Chain & Transportation

ADV CTE CC TRANS

Advanced Career and Technical Education, College Credit: Supply Chain & Transportation is a course title covering any CTE advanced course offered for credit by an accredited postsecondary institution through an adjunct agreement with a secondary school. The intent of this course is to allow students to earn college credit for courses with content that goes beyond that currently approved for high school credit. This course may be used for any dual enrollment course, including a joint program of study involving a postsecondary partnership.

6156 Supply Chain & Transportation: Special Topics

TRANS ST

Supply Chain & Transportation: Special Topics is an extended learning experience designed to address the advancement and specialization of careers within the career cluster through the provision of a specialized course for a specific workforce need in the school's region. The learning experience is at a qualified site, and is designed to give the student the opportunity to learn and practice technical skills while working under the direction of an appropriately licensed professional. Throughout the course, students will focus on learning about employment opportunities and obtaining the knowledge, skills, and attitudes essential for success in specific occupations. Course standards and curriculum must be tailored to the specific profession, preparing students to advance in this career field, and where applicable, provide students with opportunities for certification or dual credit. Participation in a related CTSO encourages the development of leadership, communication and career related skills, and opportunities for community service.

Automotive Collision Repair

7215 Principles of Collision Repair

PRIN COL REP

Principles of Collision Repair provides students an overview of the operating, electrical, 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 collision industry. Students will study the basics of collision repair, along with learning to perform basic service and maintenance including the car's starting and charging system.

7204 Automotive Body Repair

AUTO BDY REP

Automotive Body Repair provides students with an understanding of the materials, measuring, welding, and information resources applicable to collision repair. Students will study steel and aluminum dent repair, including the welding practices commonly performed within an automotive repair environment. Basic skills and knowledge in oxy-fuel welding, cutting, brazing and plasma cutting, gas metal arc welding, squeeze type resistance welding, exterior panel welding and I-CAR welding test preparation will be gained. Students will also learn the installation of moldings, ornaments, and fasteners with emphasis on sheet metal analysis and safety.

7206 Plastic Body Repair and Paint Fundamentals

PAINT FUND

Plastic Body Repair and Paint Fundamentals introduces the types of fiberglass and plastic materials used in auto body repair and considerations for automotive painting. Students will explore methods for repairing fiberglass and plastic damage, like welding, reinforcing, repairing holes, and retexturing plastic. Students will be asked to demonstrate the proper use of primers and sealers, spraying techniques, and an understanding of various paint finishes.

7380 Collision Repair Capstone

COLL RPR CAP

Collision Repair Capstone further explores important skills and competencies within the Automotive Body Technology Pathway. Topics such as automotive painting technology, collision damage appraising, and fiberglass plastic repair. Additionally, Co-Op and Internship opportunities will be available for students.

Automotive Services

7213 Principles of Automotive Services

PRIN AUTO SER

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.

7205 Brake Systems

BRK SYS

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.

7212 Steering and Suspensions

STEER SUSP

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.

7375 Automotive Service Capstone

AUTO SRV CAP

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.

Aviation Maintenance

7372 Principles of Aviation Maintenance

PRIN AVI MAI

Principles of Aviation Maintenance Regulations provides students with an understanding of Federal Aviation Administration (FAA) regulations as they pertain to aircraft technicians and the maintenance of aircraft. Topics of discussion will include aviation regulations, ground operations, weight and balance, and corrosion control.

7374 Aviation Maintenance Fundamentals

AVI MAIN FUN

Aviation Maintenance Fundamentals provides students with an understanding of aircraft materials and operations. Topics of discussion will include ground operations and servicing, cleaning and corrosion control, and weight and balance. This course will include lab elements that allow students to build necessary skills associated with the above understandings of FAA Maintenance General Section subjects.

7376 Advanced Aviation Maintenance

ADV AVI MAIN

Advanced Aviation Maintenance provides students with an understanding of aircraft drawings, electricity, and electronics systems. The course will also explore aircraft materials, hardware, processes, inspection concepts and techniques, and fluid lines and fittings. The course will include lab elements that allow students to build necessary skills associated with the above understandings of FAA Maintenance General Section subjects.

7378 Aviation Maintenance Capstone

AVI MAIN CAP

The Aviation Maintenance Capstone will explore knowledge and risks elements associated with the FAA airframe section. Topics of discussion will be non-metallic structures, landing gear, flight controls, and inspection practices. This course will prepare students for completion of the FAA airframe mechanic certificate. This course will include lab elements that allow students to build necessary skills associated with the above understandings of FAA Maintenance General Section subjects.

Aviation Management

7214 Principles of Aviation Management

PRIN AVI MAN

Principles of Aviation Management provides students the opportunity to develop an understanding of various aspects of the aviation industry to include general regulations and laws associated with the field. Included is an overview of the aviation field and all employment opportunities. Areas of study include aerodynamics, aircraft systems, performance, weight and balance, physiology, regulations, cross country planning, weather, and decision-making skills. Students will also learn of the departments associated with an airport and their impact on the industry as a whole.

7217 Private Pilot Theory

PVT PLT THRY

In Private Pilot Theory students will receive ground school knowledge required for certification as a private pilot with an airplane single engine land rating. Areas of study include aerodynamics, aircraft systems, performance, weight and balance, physiology, regulations, cross country planning, weather, and decision-making skills.

7207 Aviation Safety and Operations

AVI SAF OPS

Aviation Safety and Operations provides an overview of general aviation operations, including the operation and management of the Fixed Base Operation (FBO). It introduces the challenges and complexity of aviation security faced by aviation professionals across the industry and traces the evolution of current security approaches and explores technologies and processes targeting threat mitigation and improved operational efficiency. Emphasis will be placed on financial and operational considerations as well as on regulatory requirements and constraints.

7385 Aviation Management Capstone

AVI MGMT CAP

Aviation Management Capstone is an introduction to the aviation weather service program. Course topics include the National Weather Service, Flight Service Stations, International Civil Aviation Organization, and analyzing and interpreting weather reports and maps. Additionally, this course will prepare students for certification as an Instrument Pilot with an Airplane Single Engine Land rating. Areas of study include basic instrument flying, flying instruments, IFR charts and approach plates, IFR regulations and procedures, ATC clearances, and IFR flight planning.

Commercial Driver

7386 Principles of Transportation and Logistics

PRIN TRANS LOG

Principles of Transportation and Logistics examines the structure and importance of the commercial transportation industry in the logistics sector of business. Topics covered include an in-depth examination of the various modes of transportation including discussions of regulations, economics, characteristics, and development in major transportation modes. Also discussed are costing and pricing issues in transportation and relationship management between buyers and sellers of transportation. Additionally, this course introduces students to an overview of the CDL licensure and prepares them to get their CDL permit.

NOTE: Students are required to get a Department of Transportation Physical and Drug Screen.

7387 Commercial Drivers Operation Fundamentals

CDL OPER FUND

Commercial Drivers Operation Fundamentals introduces students to an orientation of the CDL industry, the Commercial Driver's License (CDL), driver qualifications, and the commercial vehicle. The vehicle control systems are reviewed and discussed. The vehicle systems including engine, suspension, electrical, and many others are reviewed in detail. The vehicle inspection is practiced and applied. Range and on the road training in a tractor trailer are major components of this course. Students will discuss driving in a variety of conditions including at night, emergency situations, skidding, and extreme weather. Students will practice many different driving maneuvers including backing, turning, shifting, coupling, and space and speed management in order to prepare for the CDL A exam.

NOTE: This course must be taken concurrently with Advanced Commercial Drivers Operations.

7388 Advanced Commercial Drivers Operations

ADV CDL FUND

In Advanced Commercial Drivers Operations, students will continue to practice until mastery of the pre-trip inspection, which is a critical component of passing the CDL A exam. Administrative and professional components of being a professional driver are discussed and explained including hours of service, accident reporting, personal health, communication, and Compliance, Safety, and Accountability (CAS). **Note: This course must be taken concurrently with Commercial Drivers Operations Fundamentals.** Upon successful completion of Commercial Drivers Operation Fundamentals and Advanced Commercial Drivers Operations the student will be eligible to take the CDL A examination.

Diesel Services

7216 Principles of Diesel Technology

PRIN DSL SERV

Principles of Diesel Technology introduces the maintenance requirements and procedures of modern diesel engines and medium and heavy-duty trucks. Proper procedures and requirements for the Federal Highway Safety Inspection (DOT) will be discussed and practiced. In addition, 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 electrical diagnosis and repair in the automotive electrical industry. Students will study the fundamentals of electricity and automotive electronics.

7210 Diesel Steering and Brakes

DSL STR BRKS

Diesel Steering and Brakes studies steering and suspension systems commonly used on modern tractors and trailers. Topics will include steering and suspension components, power steering units, alignment theory and procedures, tire repair and service, and wheel balancing. Diagnosis, repair, and servicing of components including modern air suspension systems will be emphasized. Additionally, this course will cover theory, service, and repair of medium and heavy truck brake systems and their components. Emphasis is given to air brakes and their theory of operation, repair, and service of system components. Spring brakes and anti-lock systems will be studied on tractors and trailers.

7211 Diesel Transmissions

DSL TRN ENGI REP

Diesel Transmissions explores theory, diagnosis, and overhaul procedures related to manual transmissions and differentials. Course topics include service of twin countershaft, under-drive, overdrive, power-dividers, and air shift systems. Additionally, this course studies precision tools, equipment, and procedures needed to repair modern diesel engines. Repair, proper assembly, and component identification are examined along with service of removable cylinder liners.

7221 Diesel Services Capstone

DESL SRV CAP

Diesel Services Capstone further explores important skills and competencies within the Diesel Technology Pathway. Topics such as truck climate control systems, diesel engine performance, HT electrical systems, Hd truck auto transmission, and heavy truck electronics. Additionally, Co-Op and Internship opportunities will be available for students.

5622 Tractor/ Trailer Operation

TRACT OPER

Tractor/Trailer Operation is a comprehensive training program that prepares students to enter the trucking industry as an entry-level tractor-trailer operator. Instruction will include both classroom activities and behind-the-wheel driving experiences. Additional emphasis will include preventive maintenance and basic control skills training. Students are required to submit to and pass a Department of Transportation, Distribution and Logistics physical exam and drug screen. In addition, **students must reach their 18th birthday prior to graduation from high school in order to enroll in and complete this course.** Upon successful completion, students will be qualified to operate Class A Commercial Vehicles on Indiana highways.

Supply Chain Management

7155 Logistics and Management

LOG MGMT

Logistics Management provides students the opportunity to explore how essential managerial functions relate to the various components of a logistics operation. Logistics concepts are approached from a manufacturing perspective with a focus on system integration and automation and lean manufacturing operations. Topics will include logistics systems, supply chain management, order, demand inventory and warehouse management, and automated components of a logistics system. Students will be prepared for the MSSC Certified Logistics Associate (CLA) and MSSC Certified Logistics Technician (CLT) certifications.

7142 Supply Chain Management

SUP CH MGMT

Supply Chain Management will build upon the knowledge and skills developed in the Logistics Management course by focusing on specific aspects of Supply Chain Management such as supply chain strategy, planning and design, customer service, purchasing, forecasting, inventory and warehouse management, as well as an in-depth study of transportation systems. Students will examine various modes of transportation and their associated characteristics, economics, and regulations.

7258 Supply Chain Management Capstone

SUP CH MGMT CAP

Supply Chain Management Capstone course will build upon the knowledge and skills learned in previous courses by taking a deeper dive into Procurement, Operations Management, Lean Manufacturing Systems.

CAREER & TECHNICAL EDUCATION INDIANA

MIDDLE SCHOOL
CAREER AND TECHNICAL EDUCATION
COURSE TITLES AND DESCRIPTIONS
2026-2027

INDIANA COMMISSION for HIGHER EDUCATION

Indiana Commission for Higher Education: Middle School Guidance for CTE Courses

Guidance for Middle School Career and Technical Education Courses

For the 2026-2027 school year, the Indiana State Board of Education (SBOE) approved the below introductory CTE courses available for funding at the eighth (8th) grade level. Schools/districts are encouraged to utilize those approved courses for students in the eighth (8th) grade when feasible. The courses listed in this section are still available for students in sixth-eighth grade but are recommended for students in grades six (6) and seven (7). A summary of the funding changes can be found here. Funding levels for all CTE courses can be found here. Questions regarding CTE courses can be shared with the state's CTE team at CTE@che.in.gov.

All CTE courses approved for funding in eighth grade are listed below:

- Engineering Essentials (7199)
- Exploring Education Professions (5415)
- Introduction to Advanced Manufacturing and Logistics (4796)
- Introduction to Agriculture (5056)
- Introduction to Business (4518)
- Introduction to Computer Science (4803)
- Introduction to Construction (4792)
- Introduction to Health Science Careers (5272)
- Introduction to Transportation (4798)
- Preparing for College and Careers (5394)

Additionally, the SBOE approved Preparing for College and Careers (5394) for funding in the seventh (7th) grade beginning with the 2026-2027 school year. As with any high school level course offered prior to the ninth (9th) grade, schools should be aware of IDOE's policy on high school credit awarded before grade nine (9) (page 3).

Course descriptions for each of the introductory courses listed above can be found in the earlier sections of this Course Titles and Descriptions document. Teacher licensing requirements, course competencies, and other relevant information can be found in the NLPS Review Document.

Career and Technical Education: Agriculture, Food, and Natural Resources

0496.68 Exploring Agriculture Science and Business

Grades Six-Eight

Exploring Agriculture Science and Business has flexibility in content due to the variety of local offerings. The nature of this course is to provide students with an overview of various aspects of the agriculture industry. Topics to be covered in this course can include: leadership, supervised agriculture experience, plant and soil science, natural resources, animal science, agribusiness, food science, and power, structure, and technical systems. Along with the current academic standards for this subject, the Science/Technical Studies Content Area Literacy Standards are incorporated with the expectation of a continuum of reading and writing skills development.

Career and Technical Education: Business and Marketing

0494.68 Exploring Business and Information Technology

Grades Six-Eight

Exploring Business and Information Technology provides concepts and applications that facilitate the development of competencies required for success in all academic areas and in real-world contexts. The curriculum relates closely to understandings and competencies students will need as their world expands and as they develop career interests. The four broad areas included in this curriculum are technology, career exploration, personal financial responsibility, and basic business (business communications, marketing, and entrepreneurship). The domains and standards for each area provide many opportunities to engage students in learning essential business content and in applying technology as a tool. This approach is in keeping with the National Education Technology Standards (NETS) approach, which places heavy emphasis on integrating technology into the curriculum. Along with the current academic standards for this subject, the Science/Technical Studies Content Area Literacy Standards are incorporated with the expectation of a continuum of reading and writing skills development.

0495.68 Digital Citizenship

Grades Six-Eight

Digital Citizenship prepares students to use computer technology in an effective and appropriate manner. Students develop knowledge of word processing, spreadsheets, presentation and communications software. Students establish what it means to be a good digital citizen and how to use technology appropriately. Along with the current academic standards for this subject, the Science/Technical Studies Content Area Literacy Standards are incorporated with the expectation of a continuum of reading and writing skills development.

Career and Technical Education: Engineering and Technology

0490.68 Exploring Engineering and Technology

Grades Six-Eight

Exploring Health Sciences provides students with a hands-on introduction to the content and skills that are necessary for a successful career in health sciences. The course standards focus on four major domains: careers in the health sciences, ethical patient interaction, self-care, and medical and scientific knowledge. Course projects and activities should explore several possible future programs of study in health sciences (e.g., biotechnology, dental careers, pre-nursing, pharmacy). Along with the current academic standards for this subject, the Science/Technical Studies Content Area Literacy Standards are incorporated with the expectation of a continuum of reading and writing skills development

Career and Technical Education: Health Care Sciences

0497.68 Exploring Health Sciences

Grades Six-Eight

Exploring Health Sciences provides students with a hands-on introduction to the content and skills that are necessary for a successful career in health sciences. The course standards focus on four major domains: careers in the health sciences, ethical patient interaction, self-care, and medical and scientific knowledge. Course projects and activities should explore several possible future programs of study in health sciences (e.g., biotechnology, dental careers, pre-nursing, pharmacy). Along with the current academic standards for this subject, the Science/Technical Studies Content Area Literacy Standards are incorporated with the expectation of a continuum of reading and writing skills development

Career and Technical Education: Miscellaneous

0492.68 Family and Consumer Sciences

Grades Six-Eight

Middle level FACS prepares students to begin their journey toward becoming independent, productive citizens. The middle school curriculum includes standards for five units of study that are essential for ALL students: Life and Careers, Financial Literacy, Nutrition and Wellness, Human Development, and Relationships. Family and Consumer Sciences (FACS), Middle Level prepares students to acquire personal skills and plan ways to transfer those skills to the workplace; investigate and assume appropriate individual and family roles; understand and apply concepts of balancing work and family; and acquire skills and attitudes that lead them to contribute to the good

of the community and society. FACS curriculum includes acquisition of problem-solving, decision-making, higher-order thinking, communication, literacy, 46 2025-2026 Elementary and Middle School Course Titles and Descriptions and numerical skills in applied community, work, and family contexts. Along with the current academic standards for this subject, the Science/Technical Studies Content Area Literacy Standards are incorporated with the expectation of a continuum of reading and writing skills development.

Career and Technical Education: Non-Subject Specific

0493.68 Exploring College and Careers

Grades Six-Eight

Exploring College and Careers provides students opportunities to explore their personal goals, interests, and aptitudes as they relate to career concepts, including the 16 national career clusters and Indiana's College and Career Pathways, and determine what they want and expect for their future. Students learn about various traditional and nontraditional careers and gain an awareness of the level of education and type of training needed for a variety of careers and occupations. Students build good study habits, expand their technology skills, develop or update their graduation plans, and complete a college and career readiness exam. Virtual and real life opportunities are provided for students to observe and explore various careers. Along with the current academic standards for this subject, the Science/Technical Studies Content Area Literacy Standards are incorporated with the expectation of a continuum of reading and writing skills development.