

FY20 CEP COURSE DESCRIPTIONS



AUTOMOTIVE TECHNOLOGY

**2 Years – High School Credits
Juniors and Seniors**

Hononegah High School

Auto Tech I is a year-long course for high school sophomores, juniors and seniors. Students will study automotive suspension/steering, brake systems, electrical/electronic systems, engine performance and vehicle services. Students will complete automotive industry theory and performance tasks for initial employment in the automotive service field or further training at the post-secondary level. Both classroom and lab activities are used to instruct students with heavy emphasis on hands-on lab activities using late model vehicles. Several field trips are taken each year, including a trip to the “New Car Show” at McCormick Place.

Auto Tech II is a year-long course designed for high school juniors and seniors. During the 1st semester students will identify and interpret electrical problems and determine necessary actions. Students will be introduced to the diagnosis and repair of starting systems, charging systems, driver information systems and electrical/electronic systems. During the 2nd semester students will identify and interpret brake system problems and determine necessary actions. Diagnosis and repair of hydraulic systems, drum brakes, disc brakes, wheel bearings, power assist units, antilock brakes and traction control will be covered. Both classroom and lab activities are used to instruct students, with heavy emphasis on lab activities using late model vehicles. Students will participate in several field trips. Students can earn articulated credit from Rock Valley College for this class.

COSMETOLOGY

**Year Long Program – High School Credits/Licensure Hours
Seniors**

Educators of Beauty

During the one year program at Educators of Beauty a high school student will acquire 200 hours toward their 1500 hour training to become a licensed cosmetologist. Students are provided a well-rounded education in hair, skin, and nails – beautification and care. The training will cover draping, shampooing, rinsing, scalp massage, product and hair knowledge, facials, makeup, manicures and nail disorders. It will also include texture skills like perming, hair relaxing, and hair pressing. Students also work on bettering communication skills, sales techniques and how to build clientele as they develop the entrepreneur mindset necessary to be a successful cosmetologist.

ENGINEERING

**2 Years – High School Credits
Junior and Seniors**

Hononegah High School

YEAR 1 Introduction to Engineering is a Project Lead the Way (PLTW), high school based engineering and technology, class. This course will cover the basics of all design skills including: sketching, processing and Computer Aided Design CAD using the 3-D modeling program Inventor. Students will be using computer hardware and software to complete and generate working CAD drawing. Hands on projects will include Puzzle Cube design challenge, Reverse Engineering, and a team design challenge. Math and research skills

will be stressed and used on a regular basis. Course content will include documentation, research, sketching, drawing, modeling/prototyping, design principles/elements, reverse engineering, marketing, and testing.

YEAR 2 Principles of Engineering is a Project Lead the Way (PLTW), high school based engineering and technology, class. In the class they will explore various technological systems and manufacturing processes that will help students learn how engineers and technicians use math, science and technology in an engineering problem solving process to benefit society. In addition, students will be using Inventor, which is a state of the art 3-D design software package, to help them design solutions to different design projects. Hands-on projects will include bridge building, simple machine design project, and marble sorting.

OTHER OPTIONS Computer Integrated Manufacturing is a Project Lead the Way (PLTW), high school based engineering and technology, class. CIM is a course that applies the principles of robotics and automation to Computer Aided Design (CAD). Students will use Computer Numerical Control (CNC) equipment to produce actual models of their three-dimensional designs. Fundamental concepts of robotics used in automated manufacturing, and design analysis are included. Students will also be using state of the art manual mills, lathes and other manufacturing equipment.

OTHER OPTIONS Engineering Design and Development is the capstone course for Project Lead the Way (PLTW) and will incorporate all of the knowledge gained from prior PLTW courses. This course is an engineering research course in which students will work in teams to research, design, and construct a solution to an open-ended engineering problem. The product development lifecycle and the design process will guide the team in reaching a solution to the problem. The team will present and defend the solution to a panel of outside reviewers at the end of the school year. Students will be expected to work independently with their team to reach established benchmarks. During the year the students will be required to seek out a compatible business mentor and communicate with them throughout the process.

ENTREPRENEURSHIP

Year Long Program – High School Credits

Hononegah High School

Juniors and Seniors

Prerequisite: preferred completion Introduction to Business

Entrepreneurship is a course designed to provide students with skills and critical thinking required create value by successfully solving problems while working within or starting their own companies. Through this training, students will gain the understanding, knowledge and skill set necessary to minimize the risk of launching a new business. Students will be taught using a lean start-up model in which they will repeatedly test aspects of their plan to increase the chance of success. Throughout the course, local professionals will provide practical support to students as mentors and content experts. The course will culminate in the opportunity to professionally pitch business models to interested investors. While this course has an emphasis for students interested in operating their own company or planning to study business in the future, any student who has a creative or technical talent they want to learn to monetize will greatly benefit from this course.

GRAPHIC COMMUNICATIONS

Year Long Program – High School Credits

Junior and Seniors

Hononegah High School

Introduction to Graphic Communications gives the creative student an opportunity to apply practical skills to bridge the gap between digital design and print production. Students will combine design and technology as they cover topics in publishing, printing, digital imaging, scanning and photography. This hands-on class offers students the opportunity to earn college credits through the PrintED national accreditation program. Students can also earn articulated credits from several two-year or four-year colleges after completing this class.

MEDICAL SCIENCE

Year Long Program – High School Credits

Seniors

Rockford Health Systems

Illinois Nurse Assistant Certification

Medical Science is designed for students interested in a health care career. The student spends 2 hours a day at Rockford Health Systems learning a core of knowledge and skills needed for many health care fields. Students will have the opportunity to shadow various health care professionals such as physical therapists, nurses and x-ray technicians. In addition, safety, assessment (temperature, pulse, respiration and blood pressure), patient transport, personal care techniques and other general health care skills are addressed. Students will have the opportunity to obtain Illinois Nurse Assistant Certification approved by the Illinois Department of Public Health. The following medical requirements are necessary: Hepatitis B vaccine, a two-step Mantoux tb test, a physical, influenza vaccine, and documentation of current immunization status.

SPORTS MEDICINE

2 Years – High School Credits

Junior and Seniors

Winnebago High School

Health Science Occupations is a course that exposes students to a variety of opportunities available within the health care industry such as nursing, therapy, vision and dental care, administrative services and lab technology. Students will be assisted in further development of their self-concept as it relates to careers in the health care field and the physical, emotional and attitudinal requirements to be successful. Content will include in-depth information into health occupations careers and trends, and the occupational and educational opportunities.

Sports Medicine is a course that will introduce the basic principles and techniques for the prevention, recognition, treatment, and rehabilitation of common injuries and illnesses. Students may learn to measure cardiorespiratory endurance, muscular strength and endurance, flexibility, body composition, and blood pressure. Labs will cover taping and bandaging, proper use of protective padding, treatment modalities, and medical terminology, budgeting, ordering supplies as well as general operation of a training room facility. More advanced topics may include injury assessment, the phases of healing and the use of exercise and equipment to help in the reconditioning of injured athletes.