

WOHS Technology and Engineering

9th Grade Course Offerings

Introduction to Engineering

Semester – 2.5 Credits

Prerequisite: None

Offered in Grades 9, 10, 11, 12

In this course students will develop interdisciplinary knowledge and skills in science, technology, engineering and math (STEM) through design oriented project-based learning, critical thinking, and problem-solving. With a focus on Engineering, students will learn about our original “DECIDER” design process and use it to problem solve and design on hands-on projects such as model skyscrapers and solar powered inventions. Students will also have the opportunity to develop their own Smartphone app, introducing them to foundations of computer software design and coding. This course is credited toward the 21st Century Life Careers/Career Technical Education credit requirement for graduation.

Sustainable Technologies

Semester – 2.5 Credits

Grades 9, 10, 11, 12

This semester course introduces students to the beliefs, philosophies, and scientific principles that support a more sustainable world. What is Sustainability? Students learn about the various technologies dealing with sustainability to secure the future of the natural resources of our world. Students design and build projects that provide sustainable solutions to real world problems that will serve to improve our natural world for future generations. Student design and fabricate project prototypes that serve to our world more sustainable such as the oil spill project and the wind turbine project. This course is credited toward the 21st Century Life Careers/Career Technical Education credit requirement for graduation.

Architectural & Engineering Design 1

Semester – 2.5 Credits

Prerequisite: None Offered in Grades: 9,10,11,12

This is a foundational course for the Architecture and Engineering Design Program. The fundamentals of drafting are introduced and applied through freehand sketching, mechanical drawings and 3D design. Students will gain knowledge on the basics of drafting by learning about abstract visualization through multi-view drawings of physical objects and 3D digital software. Students will also examine the necessity of a variety of

technical drawings to accurately represent the “designed environment” which surrounds them. Students are introduced to the art of hand-drafting, Autodesk TinkerCad and 3D Printers (LulzBot, Ultimaker & MakerBot). Students will also use the design process to solve authentic problems and project their solutions in drawings and digital format.

Graphic Communications 1

Full Year - 5 Credits

Offered in Grades: 9, 10, 11, 12

Students will be introduced to aspects of the Graphic Communications industry through hands-on experiences in desktop publishing, letterpress image carriers, screen printing, offset printing, and digital image capture utilizing Adobe CS3 computer software.

Projects include calendars, stickers, screen printed T- shirts, business sets, DVD covers, and memo pads. This course meets the 21st Century Life Careers/Career Technical Education credit requirement for graduation.