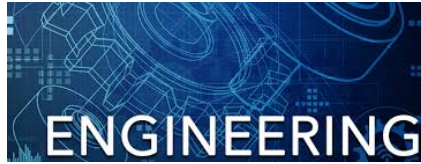


Engineering and Science Technologies Pathway

New London High School



Grades 7–12

MS/HS Course of Study

[ODE Engineering Course Descriptions grades 7–8 Link](#)

[ODE Engineering Course Description grades 9–12 Link](#)

Middle School

Design and Modeling: Students work in teams and use their creative problem-solving abilities to design a therapeutic toy for a child with cerebral palsy, and help their patient overcome physical, sensory, or cognitive challenges. Students assume the roles of drafting engineer, design engineer, mechanical engineer, and statistician as they use the design process and solve problems.

Energy and the Environment: Students are challenged to think big and toward the future as they explore sustainable solutions to our energy needs and investigate the impact of energy on our lives and the world. They design and model alternative energy sources and evaluate options for reducing energy consumption. Students explore sustainable solutions to our energy needs and investigate the impact of energy on our lives and the world.

High School

Introduction to Engineering Design Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3D modeling software and document their work in an engineering notebook.

Principles of Engineering Through problems that engage and challenge, students explore a broad range of engineering topics including mechanisms, the strength of structures and materials, and automation. Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation.

or

This course helps students understand the field of engineering/engineering technology. Fundamental principles of engineering (including dynamics and kinematics, machines, hydraulics, pneumatics, thermodynamics and strength of materials) are discussed in preparation of the mechanical and civil engineering disciplines.

Engineering Design and Development The knowledge and skills students acquire on the 'Pathway to Engineering' come together in EDD as they identify an issue and then research, design, and test a solution, ultimately presenting their solution to a panel of engineers. Students apply the professional skills they have developed to document a design process and complete EDD ready to take on any post-secondary program or career.