838 Principles of Applied Engineering – 8th
Credit: 1, applies toward high school credit
Prerequisite: None
Are you the kind of person who likes to build things? If you answered yes, then this is the course for you. Learn how to program a robot, design your own home, or create special effects for a movie. Learn by using cutting-edge equipment/technology and cooperative hands-on activities, and gain the skills necessary to be successful in the Engineering/Technology career path. Grade points are earned toward high school GPA (Grade Point Average).

8340C Introduction to Engineering Design - PLTW
Credit: 1
Prerequisite: None
If you can imagine it, you can design and engineer it in the Introduction to Engineering Design class. Students who want to use software and other technology to solve problems through designing and translating the design into a real product will enjoy this hands-on approach to exploring engineering as a career. This course can earn college credit based on Articulation agreements with Alvin Community College, Brazosport Community College and WCJC; Articulation agreements are subject to change.

PLTW Engineering Specialization Course
What would it feel like to have the expertise to build a school that could withstand an earthquake, help design the space vehicles that take people to Mars, develop systems to use computers that help humans and robots to efficiently interact, or develop artificial lenses that restore sight to blind people? The Engineering Specialization allows students to apply what they have learned in STEM courses to a more specific area of engineering.

Fulshear's Specializations:

8333C Computer Integrated Manufacturing
Credit: 1
Prerequisite: Introduction to Engineering Design
Manufactured items are part of everday life, yet most students have not been introduced to the high-tech, innovative nature of modern manufacturing. This course illuminates the opportunities related to understanding manufacturing. At the same time, it teachers students about manufacturing processes, product design, robotics, and automation.

8334 Environmental Sustainability
Credit: 1
Prerequisite: Introduction to Engineering Design
In Environmental Sustainability, students investigate and design solutions in response to real-world challenges related to clean and abundant drinking water, food supply, and renewable energy. Applying their knowledge through hands-on activities and simulations, students research and design potential solutions to these true-to-life challenges.

8330CW Engineering Science – PLTW
See Science section for Science credit
Credit: 1
Prerequisite: A PLTW Engineering Specialization course
This survey course of engineering exposes students to major concepts they'll encounter in a post-secondary engineering course of study. Students employ engineering and scientific concepts in the solution of engineering design problems. They develop problem-solving skills and apply their knowledge of research and design to create solutions to various challenges, documenting their work and communicating solutions to peers and members of the professional engineering community. This course can earn college credit based on Articulation agreements with Alvin Community College and Rochester Institute of Technology; Articulation agreements are subject to change.

8320CW Digital Electronics – PLTW
See Math section for Math credit
Credit: 1
Prerequisite: A PLTW Engineering Specialization course
Digital Electronics is the foundation of all modern electronic devices such as cellular phones, MP3 players, laptop computers, digital cameras and high-definition televisions. The major focus of this course is to expose students to the process of combinational and sequential logic design, teamwork, communication methods, engineering standards and technical documentation. This course can earn college credit based on Articulation agreements with WCJC and Rochester Institute of Technology; Articulation agreements are subject to change.

8326CW Engineering Design & Problem Solving - PLTW
See Science section for Science credit
Credit: 1
Prerequisite: Three PLTW credits, Algebra II, Chemistry & Physics
This engineering research course allows students to work in teams to research, design, and construct a solution to an open-ended engineering problem. Students apply principles developed in previous PLTW courses and must present progress reports, submit a final written report and defend their solutions to reviewers. This course can earn college credit based on Articulation agreements with Brazosport Community College; Articulation agreements are subject to change.