

Engineering Science

Local Course #: 82642

State Course ID: 13037500

Course Description:

Engineering Science is an engineering course designed to expose students to some of the major concepts and technologies that they will encounter in a postsecondary program of study in any engineering domain. Students will have an opportunity to investigate engineering and high-tech careers. In Engineering Science, students will employ science, technology, engineering, and mathematical concepts in the solution of real-world challenge situations. Students will develop problem-solving skills and apply their knowledge of research and design to create solutions to various challenges. Students will also learn how to document their work and communicate their solutions to their peers and members of the professional community.

Link to TEKS:

[https://texas-sos.appianportalsgov.com/rules-and-meetings?\\$locale=en_US&interface=VIEW_TAC_SUMMARY&queryAsDate=08%2F07%2F2025&recordId=225557](https://texas-sos.appianportalsgov.com/rules-and-meetings?$locale=en_US&interface=VIEW_TAC_SUMMARY&queryAsDate=08%2F07%2F2025&recordId=225557)

First 9 Weeks Major Topics:

Mechanisms, Simple & Complex Machines, Forces, Vectors, Efficiency, Energy: Sources & Application. Rube Goldberg simple machine Project. Career professional interview project.

Second 9 Weeks Major Topics:

Materials: Statics, Properties, Testing, Truss calculating forces and vectors culminating in a bridge building project and failure test.

Third 9 Weeks Major Topics:

Control Systems using VEX V5 testbed for block programming. Machine control using VEX V5 Claw Bot maze project. Fluid Power principles and pneumatics project. Material sorter project.

Fourth 9 Weeks Major Topics:

Statistics and Kinematics. Statistical analysis and Data exploration. Projectile calculation and predict distance, displacement, speed, velocity, and acceleration from data.