PATHWAY COURSES

LEVEL 1

ENGINEERING FOUNDATIONS I

LEVEL 2

ENGINEERING FOUNDATIONS II

LEVEL 3

ENGINEERING FOUNDATIONS ADVANCED STUDIES

PROJECT LEAD THE WAY PLTW

Learn by Doing!

Engineering classes incorporate hands-on projects and activities to develop your knowledge and skills!

RESOURCES

NDE - CTE

doe.nv.gov/cte/programs/science-technology-engineering-and-mathematics

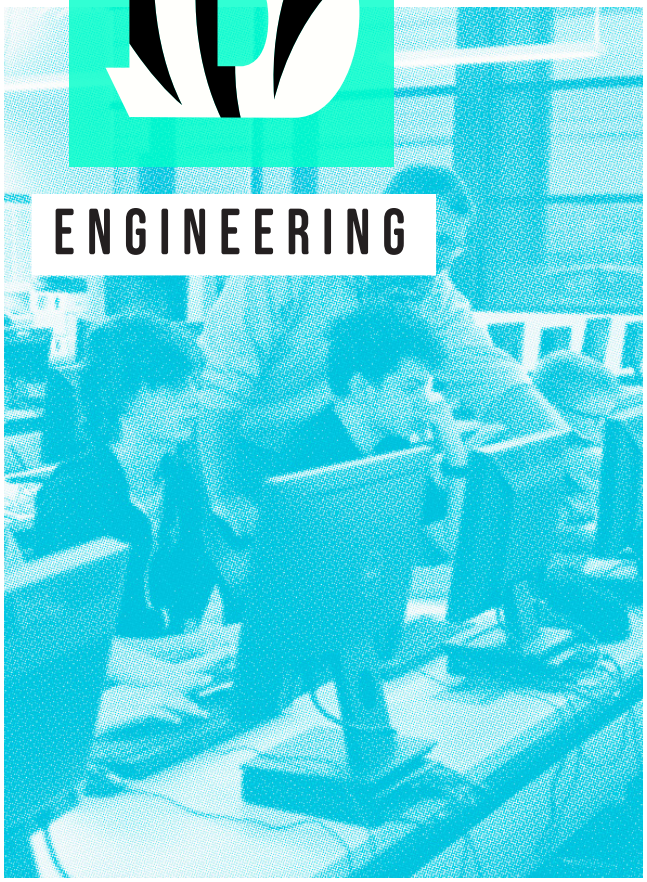
PROJECT LEAD THE WAY

pltw.org

CTE™

DOUGLAS COUNTY SCHOOL DISTRICT

ENGINEERING



Our CTE high school engineering program is designed to inspire and prepare the next generation of innovators, problem solvers, and leaders in the field of engineering. Through a dynamic and comprehensive curriculum that blends theoretical knowledge with practical, hands-on experiences, students are equipped with the skills and understanding necessary to excel in various engineering disciplines and related careers.

DOUGLAS HIGH SCHOOL
1670 HWY 88
MINDEN, NEVADA 89423
775-782-5136

LEVEL 1

ENGINEERING FOUNDATIONS I

This course is the entry-level course of the Engineering curriculum. The major focus of this course is the design process and its application. Through hands-on projects, students apply engineering standards and document their work. Students use industry-standard 3D modeling software to help them design solutions to solve proposed problems, document their work using an engineer's notebook, and communicate solutions to peers and members of the professional community.

LEVEL 2

ENGINEERING FOUNDATIONS II

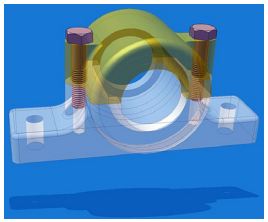
This course is a continuation of the Engineering curriculum. This survey course exposes students to major concepts they will encounter in a postsecondary engineering course of study. Topics include mechanisms, energy, statics, materials, and kinematics. They develop problem-solving skills and apply their knowledge of research and design to create solutions to various challenges, document their work, and communicate solutions.

LEVEL 3

ADVANCED STUDIES

This course is offered to students who have completed all content standards in a program and desire to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

A robotic design using the Vex Robotics system in Douglas High School's Flex Lab



3D assembly developed using modeling software

LEARN BY DOING:

As an engineering student you will learn the following:

- AutoCAD
- Design strategies using 3D Modeling Software
- Robotics
- Automated Manufacturing Techniques
- Project Management Skills