

Career & Technical Course Offerings through the College Express Program

Project Lead the Way

Project Lead the Way

The Project lead the Way course is offered at a special College Express time of 7:30 a.m. Project Lead the Way is considered a pre-engineering course. Engineering techs provide the technical support needed to transform engineers' ideas into reality. They their expert knowledge of science, engineering, and mathematics to assist in the completion of many different kinds of projects. An engineering tech's job tends to be more limited in scope and more practical than that of an engineer. Their contribution and input is highly valued and crucial to the process of everything from designing new machines to the construction of buildings to estimating the cost of a new manufacturing plant. The specific duties of engineering techs depend on the position they hold. They may include things like setting up and repairing equipment, preparing and conducting experiments, collecting data, and recording software to produce three dimensional drawings. They may also assist in the creation of prototype versions of the design.

There are many areas of specialization to chose from: civil engineering techs, electrical and electronics engineering techs, industrial engineering techs, or mechanical engineering techs. Engineering techs mainly work in the manufacturing, professional, scientific and technical service industries, but some work for governmental agencies.

Students enrolled in the Project Lead the Way program can earn college credit during high school and will take the following classes if they complete both years of the program:

DRAF 161 Engineering Graphics/Intro to Engineering (Fall) 3 hours

This course is offered for first year Project Lead the Way students. Required of engineering students. Introduction to design concepts used on production drawings with emphasis on the design process, current engineering standards, descriptive geometry, and finite element analysis. Freehand sketching and inventor software is utilized for creating and modifying 3-D solid models, orthographic multi-view drawings, dimensions, section and auxiliary views.

MFRG 120 Principals of Engineering/Pre-Engineering (Spring) 4 hours

This course is offered for first year Project Lead the Way students. This course is an introduction to engineering careers and the engineering process, design and development through classroom lectures, online research and project work.

MFRG 280 CAD/CAM/Computer Integrated Manufacturing (Spring) 3 hours

This course is offered for second year Project Lead the Way students. Theory and laboratory experience in the fundamentals of programming a CAD based system to generate numerical control programs of production machinery. Creation of tool data bases, machining curves, tool paths for lathes and mills are covered. In addition, tool and turret statements, machine characteristics, post processors are covered.

ELEC 273 Digital Electronics (Fall) 4 hours

This course is offered for second year Project Lead the Way students. Digital 1 is a study of the fundamentals of Digital Electronics as used in modern electronic systems. Boolean Algebra is used to minimize circuitry and solve logic problems the connections of AND, OR, NAND, NOR, INVERTORS, and flip-flops is studied.

Education for Employment 400

VVEDS

Vermilion Vocational Education Delivery System

