

PROJECT LEAD THE WAY – ENGINEERING ACADEMY

Greenfield-Central High School has joined with a national pre-engineering program to offer college credit courses that are designed to better prepare students for college engineering coursework. Project Lead The Way, or PLTW, is a collaborative effort of the math, science, and technology departments.

Project Lead The Way has developed a four year sequence of courses which, when combined with college preparatory mathematics and science courses in high school, introduces students to the scope, rigor, and discipline of engineering and engineering technology prior to entering college.

It is recommended that students who wish to participate in the program successfully complete Algebra in 8th grade.

The courses are counted as Core 40 directed electives. These can be applied to the Academic Honors Diploma or Technical Honors Diploma. The competencies are defined by Project Lead The Way, Inc. All PLTW courses except Introduction to Engineering Design (freshman year) have “weighted grades.”

Upon successful completion of each PLTW course and the exit exam, students may receive credits at no cost from the following universities: Purdue University, Indiana State University, IUPUI, University of Southern Indiana, Ivy Tech (dual credit) and Rochester Institute of Technology. See the guidance department for details.

Students must earn a C+ or better in all PLTW - Engineering courses to continue in the program.

Required courses:

9th Grade: IED – Introduction to Engineering Design

10th Grade: POE – Principles of Engineering

11th Grade: DE – Digital Electronics ***and one*** of the following:

AE – Aerospace Engineering

BioE – Biological Engineering

CEA – Civil Engineering and Architecture

CS SE – Computer Science and Software Engineering

12th Grade: EDD – Engineering Design and Development

Descriptions of these courses are found in the Engineering and Technology Education Department section of this guide.



Engineering Academy Curriculum

RECOMMENDED PREREQUISITES	
Algebra I	2 semesters
CORE COURSES	
IED – Introduction to Engineering Design	Freshman year; 2 semesters
POE – Principles of Engineering	Sophomore year; 2 semesters
DE – Digital Electronics	Junior year; 2 semesters
+ 1 Elective from next section	Junior year, (1 elective course); 2 semesters
EDD – Engineering Design & Development	Senior year; 2 semesters
ELECTIVE ENGINEERING COURSES	
For students interested in the following careers	
BioE – Biological Engineering	Biotechnology, Biomedical, Bioengineering
CEA – Civil Engineering & Architecture	Architecture, Landscape Architecture, Civil Engineering
CS SE – Computer Science & Software Engineering	Computer Science, Software Engineering, Computer Programming
AE – Aerospace Engineering	Aerospace, Aeronautics, Commercial Pilot, Astronaut
SUGGESTED ELECTIVE COURSE	
CADD – Computers in Design & Production	Sophomore, Junior, or Senior year; 2 semesters
SUGGESTED EXTRACURRICULAR ACTIVITIES	
VEX Robotics team	Freshman or Sophomore year
F1 in Schools team	Freshman or Sophomore year
Super Mileage team	Freshman, Sophomore, Junior, or Senior year
Women in Engineering	Freshman, Sophomore, Junior, or Senior year (females only)

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