

ENGINEERING PATHWAY



PLTW

OVERVIEW

The DB Engineering pathway is a strand of the Brahma Tech Academy and a curriculum partner of the nationally renowned Project Lead the Way (PLTW) educational program.

This pathway allows 9-12th grade students to take an exploratory route through a variety of engineering disciplines with the hopes that they become interested in pursuing this as a career.

In partnership with the Project Lead the Way (PLTW) educational program, students will receive a high rigor, project based curriculum that meets standards set by educational and industry leaders.

For more information, contact your GLC, a DB Engineering teacher or the Brahma Tech Academy Coordinator.

SUGGESTED SEQUENCE OF DB ENGINEERING, SCIENCE, MATH, AND TECHNOLOGY COURSES BY GRADE LEVEL*

9th

- **Introduction to Design (ID)** - Fulfills University of California VPA "f" Requirement
- Students develop solutions using the engineering design process, apply math and statistics to hands-on projects, learn visual art concepts, and utilize industry standard 3D modeling software
- *Geometry / Biology / Computer Systems, Intro to Robotics / School Robotics Team*

10th

- **Principles of Engineering (POE)**
- Through hands-on projects students explore a broad range of engineering fields including statics, materials, electronics, fluids, power, thermodynamics, and robotics.
- *Algebra II, Trigonometry, Math Analysis / Chemistry / AP Comp Sci, Intro to Robotics / School Robotics Team*

11th

- **Digital Electronics (DE)**
- This course provides a foundation for students who are interested in electrical and computer engineering as they study circuit logic, program microcontrollers, and utilize industry standard circuit design software.
- *Algebra II, Trig, Math Analysis, AP Calculus / AP Science Elective/ AP Comp Sci, Robotics/ School Robotics Team*

12th

- **Engineering Design and Development (EDD)**
- In this capstone class, students take the knowledge and skills they acquired throughout the previous three classes to research, design, and build a prototype that solves a problem of their choosing.
- *AP Calculus or Higher Math / AP Science Elective / AP Comp Sci, Intro to Robotics / School Robotics Team*

*Entering the program late or having problems fitting PLTW into your schedule? 10th & 11th grade PLTW students can now take a 7th class. 12th grade PLTW students can apply to take DE & EDD concurrently. 11th & 12th grade robotics team members can apply to skip certain classes due to their prior engineering experience.

**POST
SECONDARY
BENEFITS:**

College Credit*

Admission
Preference*

STEM
Scholarships*

*See the PLTW or affiliate university partner website for more details.