

**Year 1**

**Introduction to Engineering Design Skills**

- 3D modeling software
- Research and analysis,
- Engineering standards,
- Technical documentation
- Engineering Drawing
- Design process,
- Teamwork
- Solid Modeling
- Hands-on projects

**Year 2**

**Principles of Engineering Skills**

- Strength of structures
- Project Management
- Technical Communications
- Process documentation
- Hands-on projects
- Materials analysis
- Engineering Ethics
- Problem solving,
- Research

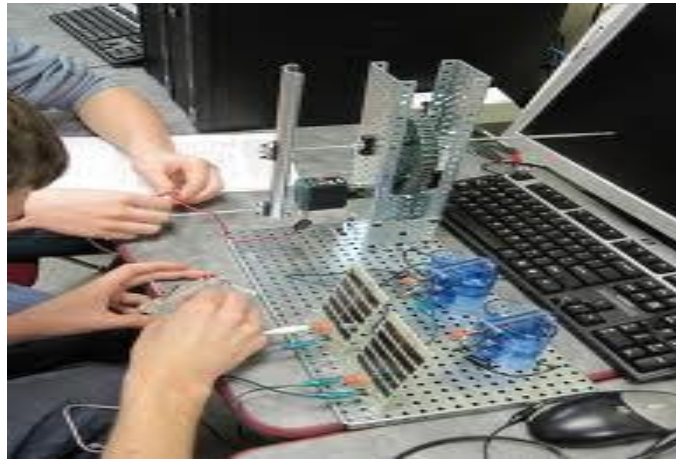
**Specialization Courses**

Years 3 & 4 (to be determined)

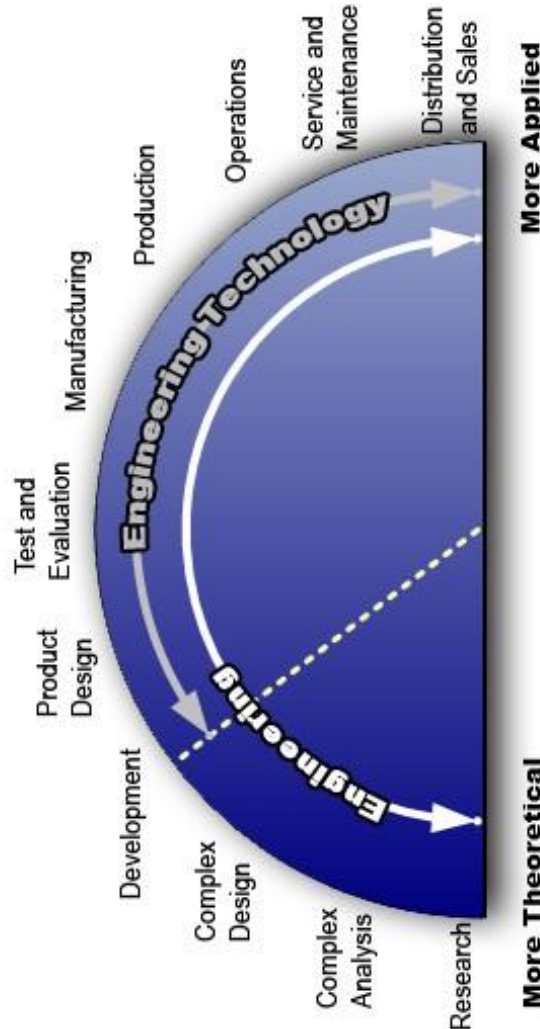
- \* **Civil Engineering and Architecture**  
\* design both residential and commercial projects
- \* **Computer Integrated Manufacturing**  
\* manufacturing processes, product design, robotics, and automation
- \* **Computer Science and Software Engineering**  
\* create apps for mobile devices, automate tasks in a variety of languages, and find patterns in data
- \* **Digital Electronics**  
\* interested in electrical engineering, electronics, or circuit design.

**Capstone Course**

- \* **Engineering Design and Development**  
\* identify an issue and then research, design, and test a solution, ultimately presenting their solution to a panel of engineers

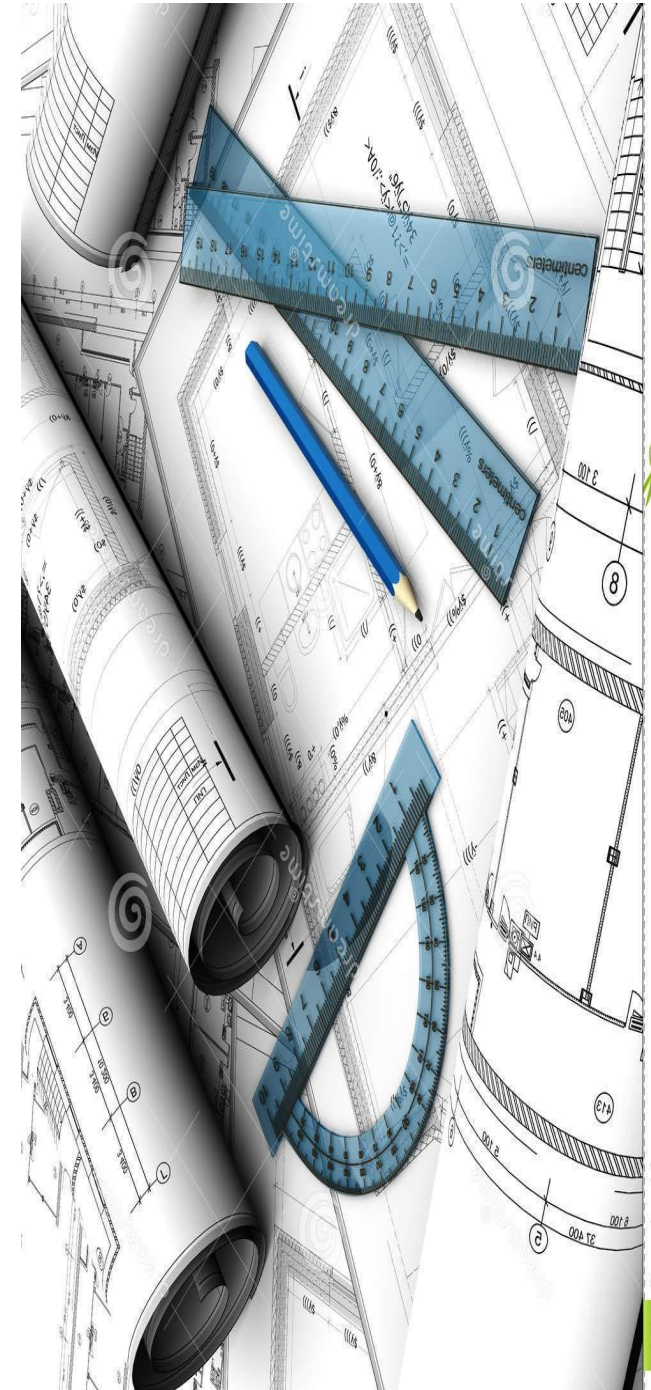


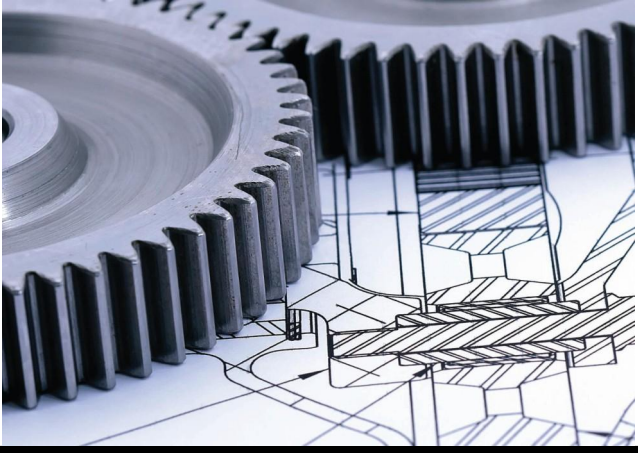
*Careers are unlimited !!*



**The Engineering Career Spectrum**

The Engineering pathway includes all courses necessary to graduate high school and complete A-G subject requirements for college.





**Grand Terrace  
High School  
Engineering Pathway**



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**Possible sequence courses for a 3 or 4 year Engineering Pathway**

<b>FRESHMAN YEAR: <u>LEARN</u></b>	<b>SOPHOMORE YEAR: <u>EXPLORE</u></b>	<b>JUNIOR YEAR: <u>ANALYZE</u></b>	<b>SENIOR YEAR: <u>DEVELOP</u></b>
English 9 (H)	English 10 (H)	English 11 (H/AP)	English 12 (H/AP)
Algebra I / Geometry	Geometry /Algebra II	Algebra II / Math Analysis	Trig/ Calculus AB (AP)
Biology (H)	World Civilizations (H)	U.S. History (AP)	US Government / Economics
Introduction to Design	Principles of Engineering	Digital Electronics, Civil Engineering & Architecture	Capstone Project
Physical Education	Chemistry (H)	Physics (H)	AP Chemistry / AP Physics (H)
Foreign Language I	Foreign Language II	visual performing arts UC	PE year 2 State/District

