

Program Goals:

- Ignite the student's passion for learning
- Create an environment where students can take risk
- Grow students as independent thinkers and researchers
- Promote teamwork, problem solving, and critical thinking
- Provide meaningful learning experiences through: challenges, project-based learning units, competitions, hands on activities, and real world applications
- Build the students' expertise in areas related to Science, Technology, Engineering, and Mathematics
- Provide opportunities for students to explore concepts and make connections to other courses
- Improve student writing and communication skills
- Encourage student creativity and innovation



Class Description:

Students enrolled in this course will demonstrate knowledge and skills of the process of design as it applies to engineering fields using multiple software applications and tools necessary to produce and present working drawings, solid model renderings, and prototypes. Students will use a variety of computer hardware and software applications to complete assignments and projects. Through implementation of the design process, students will transfer advanced academic skills to component designs. Additionally, students explore career opportunities in engineering, technology, and drafting and what is required to gain and maintain employment in these areas.



James Madison High School

13719 White Heather Dr.

Houston Texas 77045

For more information and registration call:

713-433-9804

8:30am-5pm



Engineering



Curriculum and Major Course Topics:

- ☐ The Engineering Design Process
- ☐ Working on team and employment skills
- ☐ Modeling
- ☐ Sketching
- ☐ Measurement, Statistics, and Applied Geometry
- ☐ Presentation Design and Delivery
- ☐ Engineering Drawing Standards
- ☐ Consumer Product Design Innovation
- ☐ Marketing
- ☐ Engineering Ethics



Expectations and Course Work

Students will be required to keep an engineering journal (required Supplies) as well as a portfolio of all project work. Each project grade will include points dedicated to the upkeep of the engineering journal and the student portfolio.



Pathway is part of the STEM EMDORSEMENT

