



CLIFTON HIGH SCHOOL

STEM ACADEMY

ENGINEERING CONCENTRATION

Description and General Information

The Engineering Concentration within the STEM Academy is designed for students interested in all aspects of engineering design. Students will acquire foundational knowledge and skills for entry and advanced level coursework in higher educational institutions, which includes the fundamental knowledge of engineering concepts and computer-aided technical drawing. Students will gain skills in advanced elements of engineering design through the use of AutoCAD and SolidWorks. A certificate will be awarded upon successful completion of all required courses. Participation in the STEM Club and/or the Robotics Team is encouraged starting in grade 9. The Introduction to Engineering and Fundamentals of CAD courses offer college credit with Passaic County Community College (PCCC). Possible careers related to this sequence are Science - Biology, Chemistry, Marine Biology, Physics - Technology - Computer / Information Systems, Game Design, Developer, Web / Software Developer - Engineering - Chemical, Civil, Computer, Electrical / Electronics, General & Mechanical Engineering - Mathematics & Statistics - Accounting, Auditors, Financial Specialists. Students will be placed with a mentor/adviser from the Science department to monitor and guide their progress through the STEM Academy. Students in the STEM Academy will have access to the STEM Lab in A5.

Course Schedule

9 th Grade	10 th Grade	11 th Grade	12 th Grade
English I	English II	English III	English IV
World History	US History I	US History II	Graphic Design
Physical Education	Physical Education	Physical Education	Physical Education
World Language I	World Language II	Elective	Elective
Lunch	Lunch	Lunch	Lunch
Algebra I	Geometry	Algebra II	Pre-Calculus
Biology	Chemistry	Physics	Elective
Personal Finance	Tech Drafting I	Tech Drafting II	Engineering Graphics

- Intro to Engineering - after school through Passaic County Community College - 3 college credits
- Fundamental of CAD- after school through Passaic County Community College - 3 college credits

Associated extra-curricular clubs

Language Club (based on World Language class taken)
Physics and Electricity Club
Maker Space - 3D Printing Club
STEM Club

Application

Applicants must have all prepared documents and application submitted by the application deadline in order to be considered for acceptance into the program for the following school year.
