

PRE-ENGINEERING

Course Offerings/credit (minimum of 3 courses)

<i>Computer Aided Drafting & Design</i>	1
<i>Robotics</i>	1
<i>Intro to Engineering</i>	1
<i>Probability & Statistics</i>	1
<i>Physics</i>	1
<i>Exploring Technology Processes</i>	1
<i>Honors Pre-calculus</i>	1

Career options

- Architectural Engineering & Building engineering
- Chemical Engineering
- Civil Engineering
- Industrial Engineering
- Mechanical Engineering
- Computer Engineering
- Management Engineering

Learning Opportunities

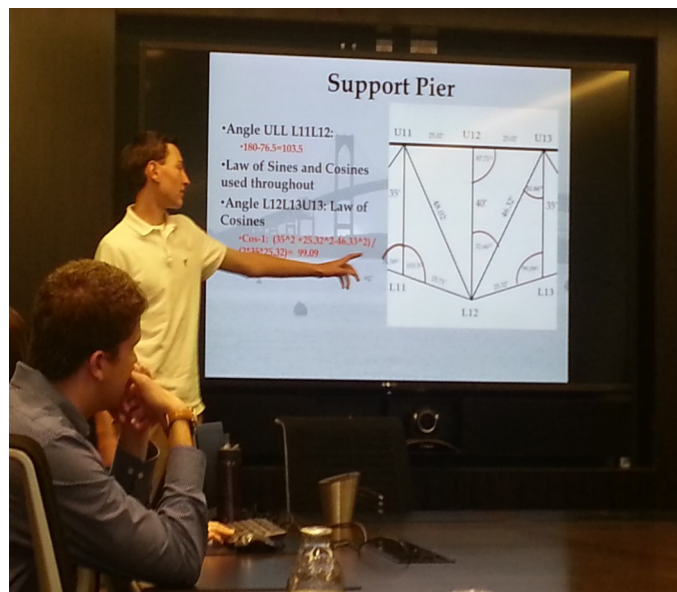
- 3D Printing- MakerBot
- CNC ShopBot Router
- Vinyl Decal cutting
- Welding
- Lego Robotics
- First Robotics Competition
- Vex Robots

PATHWAY DESCRIPTION

Students choosing to follow this pathway will be exposed to a variety of courses related to the engineering industry. A professional engineer is competent by virtue of his/her fundamental education and training to apply the scientific method and outlook to the analysis and solution of engineering problems. He/she is able to assume personal responsibility for the development and application of engineering science and knowledge, notably in research, design, construction, manufacturing, superintending, managing and in the education of the engineer. His/her work is predominantly intellectual and varied and not of a routine mental or physical character. It requires the exercise of original thought and judgement and the ability to supervise the technical and administrative work of others. His/her education will have been such as to make him/her capable of closely and continuously following progress in his/her

branch of engineering science by consulting newly published works on a worldwide basis, assimilating such information and applying it independently. He/she is thus placed in a position to make contributions to the development of engineering science or its applications. His/her education and training will have been such that he/she will

have acquired a broad and general appreciation of the engineering sciences as well as thorough insight into the special features of his/her own branch. In due time he/she will be able to give authoritative technical advice and to assume responsibility for the direction of important tasks in his/her branch.



PATHWAY RECOMMENDATION

Students interested in pursuing a pathway in this area should meet with their guidance counselor to select the best sequence of courses that will satisfy the North Smithfield High School graduation requirements and at the same time, meet the criteria

to receive a seal of concentration in Engineering. Students will also develop an engineer related focus which will culminate in field experience for the required senior project. It is recommended that stu-

dents choosing this concentration, actively seek postsecondary schools to further their education in this field.