

### CTE Course Sequence

1. Introduction to Engineering Design
2. Principles of Engineering
3. Engineering Design & Development

Pre-Engineering students must also complete in core courses

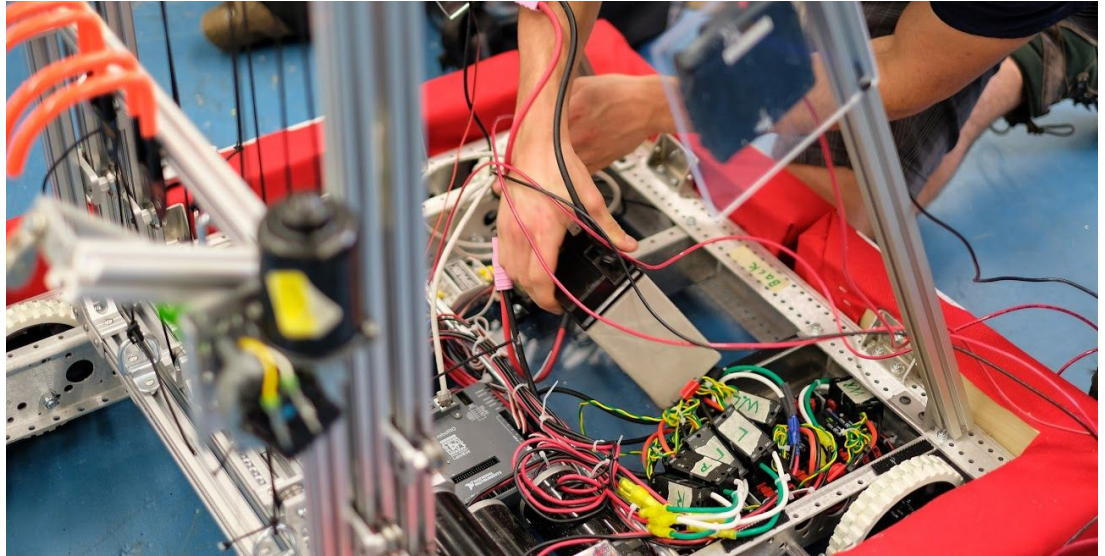
Pre-Calculus  
Physics

### Career Options

- Chemical Engineering
- Civil Engineering
- Industrial Engineering
- Mechanical Engineering
- Computer Engineering
- Architectural / Building Engineering

### Learning Opportunities

- 3D Printing/MakerBot
- CNC ShopBot Router
- Welding
- First Robotics Competition
- Vex Robots
- Partnership with engineering firm



### Pathway Description

Students choosing to follow this pathway will experience 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 chosen area of Engineering.

### Pathway Recommendations

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 Pre-Engineering. It is recommended that students choosing this concentration actively seek post-secondary schools to further their education in this field.