What courses should I take in high school to be prepared for engineering?

There are general admission requirements for all applicants to Virginia Tech (see below). In addition, you should take mathematics (at least through trigonometry), and both chemistry, and physics. Calculus is desirable, but not required. A thorough knowledge of trigonometry and pre-calculus subjects will be necessary for success. Many high school students believe that success in English, foreign language, the social sciences, and the humanities is not important for engineering students or for engineers. This is simply not true. In addition to their technical knowledge, engineers must be highly skilled communicators with knowledge and understanding of society, history, and how to work with the incredibly diverse mix of individuals that one encounters throughout the world.

VT general admission requirements:

- 18 units of high-school course work
- 4 units of English
- 3 units of math (includes algebra I, geometry, and algebra II)
- 2 units of laboratory science (chosen from biology, chemistry or physics)
- 2 units of social science (one must be history)
- 3 additional academic units (foreign language is highly recommended)
- 4 elective units

Engineering specific admission requirements:

- 4 units of math (including trigonometry or pre-calculus)
- 3 units of laboratory science (physics and chemistry preferred)

Students can also prepare for engineering studies by taking engineering foundations (including CAD), computer programming, and advanced placement courses, as well as participating in math and science clubs and fairs during high school.

Foreign Language Requirement for all Virginia Tech Students

All undergraduates must meet a language study requirement in one of the following ways:

1. Successfully complete two (2) units/years of a single foreign language during high school
2. Earn six (6) credit hours of a single college-level foreign or classical language before graduation, such credits being in addition to the number normally required for graduation
3. Receive credit by exam for a foreign or classical language (for student's whose native language is not English, or students who are bi-lingual). *

*If your native language is not English, or you are bi-lingual, you need to visit the Foreign Language Department (331 Major Williams) to have your language equivalency approval statement issued to the college of Engineering.