Engineering

Dual Degree Program
Students in this program study for three years at Covenant College before transferring to an approved engineering school. The dual degree program allows students to gain the benefits of the Christ-centered education offered by Covenant and the excellent scientific training available from a variety of universities and technical institutes. While we have a preferred relation with the Georgia Institute of Technology, recent participants in the program have also attended a number of other universities such as Clemson, the University of Kentucky, Tennessee Tech, and Auburn.

Because of the rigorous nature of this program, students should have an SAT score of at least 1100 and a minimum math SAT score of 600 (or equivalent ACT) prior to enrollment at Covenant. Students may request the approval of specific engineering schools by submitting a catalog to the Dual Degree Program Director at Covenant. The program director will identify requirements that must be transferred back to Covenant to complete a Bachelor of Arts in Natural Science: Mathematics while completing a Bachelor of Science in a variety of disciplines of engineering or math. Admittance to or completion of the pre-engineering program at Covenant College does not automatically guarantee admission to the approved engineering school. Each student must meet the transfer student admission requirements of the approved institution.

Engineering Course Requirements

Requirements for Major in Natural Science with Concentration in Pre-engineering Studies
The core and distribution requirements for a major in natural science concentration in physics are, for the most part, those listed for baccalaureate degrees on page 22. Exceptions can be made depending on the particular requirements of the school to which a transfer is planned for completion of the dual degree program. For example, for Georgia Tech, the following exceptions should be made:

- Six hours of English Composition are required rather than three. (ENG 114. Introduction to Literature is recommended to fulfill this requirement.)
- ICS 130 should be taken to fulfill Georgia Tech’s computer science requirement; however, students will still need to take ICS 120, which covers a Christian view of technology and is a one-credit course.

- Three hours of United States history are required (HIS 111D, 112D, or 316).
- ENG 252 Speech fulfills the core ‘S’ requirement.
- Three hours of Economics are encouraged (ECO 201 or 202), which will satisfy Covenant College’s Social Science requirement.
- Three additional hours of a Social Science are required.
- MAT 331. Linear algebra is required.
- A GPA of 3.0 must be maintained to be accepted by Georgia Tech both for all courses as well as math, science, and engineering courses.

Core requirements .............................................................. 57

Major and Supporting Course Requirements

CHE 121-122. General Chemistry................................. 8
ICS 120. Christian View of Technology ..................... 1
ENG 252. Speech ‘S’ ...................................................... 2
MAT 145-146. Calculus I, II........................................... 8
MAT 247. Calculus III.................................................... 4
MAT 348. Differential Equations.................................. 4
PHY 231-232. General Physics.................................... 8
PHY 233. Optics and Modern Physics ......................... 4
PHY 321. Statics .......................................................... 3
PHY 322. Dynamics ...................................................... 3
PHY 492. Senior Integration Paper ............................. 2
Total.......................................................................... 45

Students must complete at least 96 semester credits at Covenant College with a grade point average of 2.00 or higher.

Students attending institutions employing the quarter system should complete a minimum of 45 credit hours in their major science or engineering program with a minimum GPA of 3.0 on a 4-point scale.

Students attending institutions employing the semester system should complete a minimum of 30 credit hours in their major science or engineering program with a minimum GPA of 3.0 on a 4-point scale.