

Program Overview

This agreement establishes a plan whereby an undergraduate student will attend Gordon College for approximately three (3) academic years and the University of Southern California Viterbi School of Engineering for approximately two (2) academic years. After being admitted and satisfying the academic requirements of the two institutions, the student will be awarded a Bachelor's degree from Gordon College and a Bachelor's degree from the University of Southern California Viterbi School of Engineering, provided the required core courses are completed.

Admission Guidelines

To be competitive for admission, the student is expected to:

- i. earn a minimum overall GPA of 3.0 showing demonstrated success in math and science
- ii. complete required core courses prior to enrolling at USC
- iii. be in good academic and judicial standing at Gordon College

Applicants must complete the USC application process for admission. Admission requirements for students participating in the 3+2 Program with Gordon College are developed by the USC Viterbi School and may change year to year. Applicants are strongly encouraged to visit <http://viterbiadmission.usc.edu> for additional admission information.

Residency

It is expected that students applying for this program have attended Gordon College for three consecutive years prior to admission to USC. Students apply for the 3+2 Program during their third year. If a student has attended Gordon College for four (4) academic years, they may be considered for the 3+2 Engineering Program provided they have met all of the admission requirements for the 3+2 Engineering Program, and they will not receive a Bachelor's degree from Gordon College School until they have completed the engineering degree requirements at USC. All students applying should be aware that they may not qualify for federal financial aid if they received federal financial aid for four (4) years at Gordon College. All students must complete a minimum of forty-eight (48) units in residence at USC.

Core Curriculum

The following sections include the engineering degrees awarded by USC through the 3+2 Engineering Program with Gordon College, including required courses for each major. In order to complete the 3+2 Engineering Program in two years at USC, courses listed below should be completed prior to USC enrollment. In addition to the courses listed below, students must satisfy all General Education requirements at Gordon College prior to enrollment at USC, with the exception of Writing 340 (Advanced Writing) which must be taken at USC. Only grades of a "C" or better will transfer to the USC Viterbi School of Engineering.

It is strongly recommended that Gordon College students participating in this program consult the current academic handbook for the USC Viterbi School of Engineering and the USC Catalogue relative to their progress in the program and establish contact with the USC Viterbi Admission & Student Affairs Office as soon as they become interested in this program.

Properly articulated, the courses listed below will satisfy requirements at the USC Viterbi School of Engineering for the respective majors. Please consult the 3+2 Program Student Guide (below) for specific Gordon College course numbers. Please note - all coursework taken prior to enrollment at USC is subject to review to determine admission eligibility for the 3+2 Engineering Program at USC.

The program requirements listed in the USC Catalogue supersede any information which may be contained in this or any other publication of any school or department. The University reserves the right to change its policies, rules, regulations, requirements and course offerings at any time.

Gordon College 3+2 Program Student Guide

Below are the courses students should take at Gordon College based on their intended major at the USC Viterbi School of Engineering.

Aerospace & Mechanical Engineering

Completion of PHY 216 and Dynamics is strongly recommended prior to enrolling at USC.

| Degree Program | MATH | CHEMISTRY | PHYSICS | ADDITIONAL COURSES* | COMPUTER PROGRAMMING |
|--|--|-----------|---------------------------------|---------------------|----------------------|
| Aerospace Engineering, B.S. | MAT 141, MAT 142, MAT 223 + PHY 214, MAT 225 | CHE 111 | PHY 121 + 122 + 225 + 236 + 314 | PHY 216 Dynamics | MATLAB |
| Mechanical Engineering, B.S. | | | | | |
| Mechanical Engineering (Petroleum), B.S. | | | | | |

Astronautical Engineering

Completion of PHY 216 is strongly recommended prior to enrolling at USC.

| Degree Program | MATH | CHEMISTRY | PHYSICS | ADDITIONAL COURSES* | COMPUTER PROGRAMMING |
|---------------------------------|--|-----------|---------------------------------|---------------------|----------------------|
| Astronautical Engineering, B.S. | MAT 141, MAT 142, MAT 223 + PHY 214, MAT 225 | CHE 111 | PHY 121 + 122 + 225 + 236 + 314 | PHY 216 | MATLAB |

Biomedical Engineering

Biomedical Students (all degree programs) may consult the Viterbi School of Engineering for possible Biology course recommendations.

| Degree Program | CHEMISTRY | PHYSICS | MATH | COMPUTER PROGRAMMING |
|---|------------------------|---------------------------------|--|----------------------|
| Biomedical Engineering, B.S. | CHE 111, 112, 211, 212 | PHY 121 + 122 + 225 + 236 + 314 | MAT 141, MAT 142, MAT 223 + PHY 214, MAT 225 | MATLAB |
| Biomedical Engineering (Molecular-Cellular), B.S. | CHE 111, 112, 211, 212 | | | |
| Biomedical Engineering (Electrical), B.S. | CHE 111, 112, 211 | | | |
| Biomedical Engineering (Mechanical), B.S.* | CHE 111, 112, 211 | | | |

*Biomedical/Mechanical students are advised to complete PHY 216 prior to enrolling at USC.

Chemical Engineering

The Chemical Engineering degrees listed below cannot normally be completed in two years. Usually, at least one or two additional semesters is needed to complete the degree. Chemical Engineers who plan to complete the Chemistry courses listed here should contact the Viterbi School of additional chemistry recommendations.

| Degree Program | CHEMISTRY | PHYSICS | MATH | COMPUTER PROGRAMMING |
|---|------------------------|------------------------------------|--|----------------------|
| Chemical Engineering, B.S. | CHE 111, 112, 211, 212 | PHY 121 + 122 + 225 + 236 + 314 | MAT 141, MAT 142, MAT 223 + PHY 214, MAT 225 | MATLAB |
| Chemical Engineering (Biochemical), B.S. | CHE 111, 112, 211 | | | |
| Chemical Engineering (Environmental), B.S. | CHE 111, 112, 211 | | | |
| Chemical Engineering (Nanotechnology), B.S. | CHE 111, 112, 211 | | | |
| Chemical Engineering (Petroleum), B.S. | CHE 111, 112, 211 | | | |
| Chemical Engineering (Polymers/Materials Science), B.S. | CHE 111, 112, 211, 212 | | | |
| Chemical Engineering (Sustainable Energy), B.S. | CHE 111, 112, 211, 212 | | | |

Civil & Environmental Engineering

The *Civil Engineering, B.S.* and *Civil Engineering (Structural), B.S.* degree programs can not normally be completed in two years unless PHY 216, Strength of Materials, and Dynamics are completed prior to enrolling at USC.

| Degree Program | BIOLOGY | CHEMISTRY | Additional Courses | PHYSICS | MATH | COMPUTER PROGRAMMING |
|---|---|-------------------|--|---------------------------------------|--|----------------------|
| Civil Engineering, B.S. | N/A | CHE 111 | PHY 216, Strength of Materials, & Dynamics | PHY 121 + 122 + 225 + 236 + 314 | MAT 141, MAT 142, MAT 223 + PHY 214, MAT 225 | MATLAB |
| Civil Engineering (Construction), B.S. | N/A | CHE 111 | PHY 216, Strength of Materials, & Dynamics | | | |
| Civil Engineering (Water Resources), B.S. | N/A | CHE 111 | PHY 216, Strength of Materials, & Dynamics | | | |
| Civil Engineering (Environmental), B.S. | General Biology II: Cell Biology & Physiology + lab | CHE 111, 112 | PHY 216, Strength of Materials, & Dynamics | | | |
| Civil Engineering (Structural), B.S. | N/A | CHE 111 | PHY 216, Strength of Materials, & Dynamics | | | |
| Environmental Engineering, B.S.* | General Biology II: Cell Biology & Physiology + lab | CHE 111, 112, 211 | PHY 216 | | | |

**Environmental Engineering* students may need to take one additional course during the summer term at USC

Computer Engineering & Computer Science

The Computer Engineering & Computer Science, B.S. degree program can not normally be completed in two years unless students pass the Computer Science Challenge exam that allows a student to be waived from taking USC's CSCI 103 (Intro to Programming).

| Degree Program | MATH | SCIENCE | COMPUTER PROGRAMMING |
|---|--|--|---|
| Computer Engineering/Computer Science, B.S. * | MAT 141, MAT 142, MAT 223 + PHY 214, MAT 232 | PHY 121 + 122 + 225 + 236 + 314 | Students are strongly recommended to take a C++ programming course. Doing so may help prepare them to take the Comp. Sci. Department's Challenge Exam upon enrollment at USC. |
| Computer Science, B.S. | MAT 141, MAT 142, MAT 223 + PHY 214, MAT 232 | PHY 121 + 122 + 225 + 236 + 314 Or CHE 111, 112 Or General Biology I: Organismal Biology & Evolution + lab | Students are strongly recommended to take a C++ programming course. Doing so may help prepare them to take the Comp. Sci. Department's Challenge Exam upon enrollment at USC. |
| Computer Science (Games), B.S. | MAT 141, MAT 142, MAT 232 | PHY 121 | Students are strongly recommended to take a C++ programming course. Doing so may help prepare them to take the Comp. Sci. Department's Challenge Exam upon enrollment at USC. |

Electrical Engineering

| Degree Program | MATH | PHYSICS | COMPUTER PROGRAMMING |
|------------------------|--|---------------------------------|----------------------|
| Electrical Engineering | MAT 141, MAT 142, MAT 223 + PHY 214, MAT 225 | PHY 121 + 122 + 225 + 236 + 314 | MATLAB |

Industrial & Systems Engineering

| Degree Program | MATH | CHEMISTRY | PHYSICS | COMPUTER PROGRAMMING |
|--|--|-----------|---------------------------------|----------------------|
| Industrial & Systems Engineering (Information Systems), B.S. | MAT 141, MAT 142, MAT 223 + PHY 214, MAT 232 | CHE 111 | PHY 121 + 122 + 225 + 236 + 314 | C++ |
| Industrial & Systems Engineering, (Operations) B.S. | | | | |