

Program Overview

This agreement establishes a plan whereby an undergraduate student will attend University of San Francisco 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 University of San Francisco 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 University of San Francisco

Applicants must complete the USC application process for admission. Admission requirements for students participating in the 3+2 Program with University of San Francisco 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 University of San Francisco 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 University of San Francisco 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 University of San Francisco 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 University of San Francisco. 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 University of San Francisco, 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 University of San Francisco 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 University of San Francisco 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 University of San Francisco 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.

University of San Francisco 3+2 Program Student Guide

Below are the courses students should take at University of San Francisco based on their intended major at the USC Viterbi School of Engineering.

Aerospace & Mechanical Engineering

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

| Degree Program | MATH | CHEMISTRY | PHYSICS | ADDITIONAL COURSES* | COMPUTER PROGRAMMING |
|--|-------------------------|----------------|---------------------------|---------------------|----------------------|
| Aerospace Engineering, B.S. | MATH 109, 110, 211, 371 | CHEM 111 + 112 | PHYS 110 + 210, 240 + 340 | Statics Dynamics | MATLAB |
| Mechanical Engineering, B.S. | | | | | |
| Mechanical Engineering (Petroleum), B.S. | | | | | |

Astronautical Engineering

Completion of Statics is strongly recommended prior to enrolling at USC.

| Degree Program | MATH | CHEMISTRY | PHYSICS | ADDITIONAL COURSES* | COMPUTER PROGRAMMING |
|---------------------------------|-------------------------|----------------|---------------------------|---------------------|----------------------|
| Astronautical Engineering, B.S. | MATH 109, 110, 211, 371 | CHEM 111 + 112 | PHYS 110 + 210, 240 + 340 | Statics | 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. | CHEM 111 + 112, 113 + 114, 230 + 232, 231 + 233 | PHYS 110 + 210, | MATH 109, 110, 211, 371 | MATLAB |
| Biomedical Engineering (Molecular-Cellular), B.S. | CHEM 111 + 112, 113 + 114, 230 + 232, 231 + 233 | | | |
| Biomedical Engineering (Electrical), B.S. | CHEM 111 + 112, 113 + 114, 230 + 232 | | | |
| Biomedical Engineering (Mechanical), B.S.* | CHEM 111 + 112, 113 + 114, 230 + 232 | | | |

*Biomedical/Mechanical students are advised to complete Statics 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. | CHEM 111 + 112, 113 + 114, 230 + 232, 231 + 233 | PHYS 110 + 210 | MATH 109, 110, 211, 371 | MATLAB |
| Chemical Engineering (Biochemical), B.S. | CHEM 111 + 112, 113 + 114, 230 + 232 | | | |
| Chemical Engineering (Environmental), B.S. | CHEM 111 + 112, 113 + 114, 230 + 232 | | | |
| Chemical Engineering (Nanotechnology), B.S. | CHEM 111 + 112, 113 + 114, 230 + 232 | | | |
| Chemical Engineering (Petroleum), B.S. | CHEM 111 + 112, 113 + 114, 230 + 232 | | | |
| Chemical Engineering (Polymers/Materials Science), B.S. | CHEM 111 + 112, 113 + 114, 230 + 232, 231 + 233 | | | |
| Chemical Engineering (Sustainable Energy), B.S. | CHEM 111 + 112, 113 + 114, 230 + 232, 231 + 233 | | | |

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 Statics, 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 | CHEM 111 + 112 | Statics, Strength of Materials, & Dynamics | PHYS 110 + 210, | MATH 109, 110, 211, 371 | MATLAB |
| Civil Engineering (Construction), B.S. | N/A | CHEM 111 + 112 | Statics, Strength of Materials, & Dynamics | | | |
| Civil Engineering (Water Resources), B.S. | N/A | CHEM 111 + 112 | Statics, Strength of Materials, & Dynamics | | | |
| Civil Engineering (Environmental), B.S. | BIOL 105 + 106 | CHEM 111 + 112, 113 + 114 | Statics, Strength of Materials, & Dynamics | | | |
| Civil Engineering (Structural), B.S. | N/A | CHEM 111 + 112 | Statics, Strength of Materials, & Dynamics | | | |
| Environmental Engineering, B.S.* | BIOL 105 + 106 | CHEM 111 + 112, 113 + 114, 230 + 232 | Statics | | | |

**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. * | MATH 109, 110, 211, Linear Algebra | PHYS 110 + 210, PHYS 210 | 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. | MATH 109, 110, 211, Linear Algebra | PHYS 110 + 210 Or CHEM 111 + 112, 113 + 114 Or BIOL 105 + 106 | 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. | MATH 109, 110, Linear Algebra | PHYS 110 + 210 | 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 | MATH 109, 110, 211, 371 | PHYS 110 + 210, 240 + 340 | MATLAB |

Industrial & Systems Engineering

| Degree Program | MATH | CHEMISTRY | PHYSICS | COMPUTER PROGRAMMING |
|--|------------------------------------|----------------|----------------|----------------------|
| Industrial & Systems Engineering (Information Systems), B.S. | MATH 109, 110, 211, Linear Algebra | CHEM 111 + 112 | PHYS 110 + 210 | C++ |
| Industrial & Systems Engineering, (Operations) B.S. | | | | |