

Scripps College 3+2 Program Student Guide

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

Aerospace & Mechanical Engineering

In addition to completing the courses listed below, completion of Statics and Dynamics is strongly recommended prior to enrolling at USC.

Degree Program	MATH	CHEMISTRY	PHYSICS	COMPUTER PROGRAMMING
Aerospace Engineering, B.S.	MATH 30 SC, 31 SC, 32 SC, 111 CM	CHEM 14L KS	PHYS 33L KS, 34L KS, 35L KS	MATLAB
Mechanical Engineering, B.S.				
Mechanical Engineering (Petroleum), B.S.				

Astronautical Engineering

In addition to completing the courses listed below, completion of Statics is strongly recommended prior to enrolling at USC.

Degree Program	MATH	CHEMISTRY	PHYSICS	COMPUTER PROGRAMMING
Astronautical Engineering, B.S.	MATH 30 SC, 31 SC, 32 SC, 111 CM	CHEM 14L KS	PHYS 33L KS, 34L KS, 35L KS	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 14L KS, 15L KS, 116L KS, 117L KS	PHYS 33L KS, 34L KS	MATH 30 SC, 31 SC, 32 SC, 111 CM	MATLAB
Biomedical Engineering (Biochemical), B.S.	CHEM 14L KS, 15L KS, 116L KS, 117L KS			
Biomedical/Electrical Engineering (combined program), B.S.	CHEM 14L KS, 15L KS, 116L KS			
Biomedical/Mechanical Engineering(combined program), B.S.*	CHEM 14L KS, 15L KS, 116L KS			

*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 14L KS, 15L KS, 116L KS, 117L KS	PHYS 33L KS, 34L KS	MATH 30 SC, 31 SC, 32 SC, 111 CM	MATLAB
Chemical Engineering (Biochemical), B.S.	CHEM 14L KS, 15L KS, 116L KS			
Chemical Engineering (Environmental), B.S.	CHEM 14L KS, 15L KS, 116L KS			
Chemical Engineering (Nanotechnology), B.S.	CHEM 14L KS, 15L KS, 116L KS			
Chemical Engineering (Petroleum), B.S.	CHEM 14L KS, 15L KS, 116L KS, 117L KS			
Chemical Engineering (Polymers/Materials Science), B.S.	CHEM 14L KS, 15L KS, 116L KS, 117L KS			
Chemical Engineering (Sustainable Energy), B.S.	CHEM 14L KS, 15L KS, 116L KS, 117L KS			

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 14L KS	Statics, Strength of Materials, & Dynamics	PHYS 33L KS, 34L KS	MATH 30 SC, 31 SC, 32 SC, 111 CM	MATLAB
Civil Engineering (Environmental), B.S.	BIOL 43L KS + 44L KS	CHEM 14L KS, 15L KS	Statics, Strength of Materials, & Dynamics			
Civil Engineering (Structural), B.S.	N/A	CHEM 14L KS	Statics, Strength of Materials, & Dynamics			
Environmental Engineering, B.S.*	BIOL 43L KS + 44L KS	CHEM 14L KS, 15L KS, 116L KS	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	PHYSICS	COMPUTER PROGRAMMING
Computer Engineering/Computer Programming, B.S.	MATH 30 SC, 31 SC, 32 SC, Linear Algebra	PHYS 33L KS, 34L KS	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	BIOLOGY	PHYSICS	COMPUTER PROGRAMMING
Electrical Engineering	MATH 30 SC, 31 SC, 32 SC, 111 CM	BIOL 43L KS + 44L KS	PHYS 33L KS + 34L KS, 35L KS	MATLAB

Industrial & Systems Engineering

Degree Program	MATH	CHEMISTRY	PHYSICS	COMPUTER PROGRAMMING
Industrial & Systems Engineering, (Operations) B.S.	MATH 30 SC, 31 SC, 32 SC, Linear Algebra	CHEM 14L KS	PHYS 33L KS, 34L KS	C++
Industrial & Systems Engineering (Information Systems), B.S.				