

# **Program Overview**

This agreement establishes a plan whereby an undergraduate student will attend Pepperdine University 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 Pepperdine University 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 Pepperdine University

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

# Residency

It is expected that students applying for this program have attended Pepperdine University 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 Pepperdine University 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 Pepperdine University 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 Pepperdine University. 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 Pepperdine University, 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 Pepperdine University 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 Pepperdine University 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 Pepperdine University 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.



# Pepperdine University 3+2 Program Student Guide

Below are the courses students should take at Pepperdine University 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.					
Mechanical Engineering, B.S.	MATH 210, 211, 250, PHYS	CHEM 120 + Lab	PHYS 210, 211, 312	Statics Dynamics	MATLAB
Mechanical Engineering (Petroleum) , B.S.	320				

#### 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 210, 211, 250, PHYS 320	CHEM 120 + Lab	PHYS 210, 211, 312	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 120 + Lab, CHEM 121 + Lab, CHEM 310 + Lab, CHEM 311 + Lab			
Biomedical Engineering (Molecular-Cellular), B.S.	CHEM 120 + Lab, CHEM 121 + Lab, CHEM 310 + Lab, CHEM 311 + Lab	PHYS 210, 211	MATH 210, 211, 250, PHYS 320	MATLAB
Biomedical Engineering (Electrical), B.S	CHEM 120 + Lab, CHEM 121 + Lab, CHEM 310 + Lab			
Biomedical Engineering (Mechanical), B.S.*	CHEM 120 + Lab, CHEM 121 + Lab, CHEM 310 + Lab			

\*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 120 + Lab, CHEM 121 + Lab, CHEM 310 + Lab, CHEM 311 + Lab			
Chemical Engineering (Biochemical), B.S.	CHEM 120 + Lab, CHEM 121 + Lab, CHEM 310 + Lab			
Chemical Engineering (Environmental), B.S.	CHEM 120 + Lab, CHEM 121 + Lab, CHEM 310 + Lab			
Chemical Engineering (Nanotechnology), B.S.	CHEM 120 + Lab, CHEM 121 + Lab, CHEM 310 + Lab	PHYS 210, 211	MATH 210, 211, 250, PHYS 320	MATLAB
Chemical Engineering (Petroleum), B.S.	CHEM 120 + Lab, CHEM 121 + Lab, CHEM 310 + Lab			
Chemical Engineering (Polymers/Materials Science), B.S.	CHEM 120 + Lab, CHEM 121 + Lab, CHEM 310 + Lab, CHEM 311 + Lab			
Chemical Engineering (Sustainable Energy), B.S.	CHEM 120 + Lab, CHEM 121 + Lab, CHEM 310 + Lab, CHEM 311 + Lab			



## 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 120 + Lab	Statics, Strength of Materials, & Dynamics		MATH 210, 211, 250, PHYS 320	MATLAB
Civil Engineering (Construction), B.S.	N/A	CHEM 120 + Lab	Statics, Strength of Materials, & Dynamics			
Civil Engineering (Water Resources), B.S.	N/A	CHEM 120 + Lab	Statics, Strength of Materials, & Dynamics			
Civil Engineering (Environmental), B.S.	BIOL 211	CHEM 120 + Lab, CHEM 121 + Lab	Statics, Strength of Materials, & Dynamics	PHYS 210, 211		
Civil Engineering (Structural), B.S.	N/A	CHEM 120 + Lab	Statics, Strength of Materials, & Dynamics			
Environmental Engineering, B.S.*	BIOL 211	CHEM 120 + Lab, CHEM 121 + Lab, CHEM 310 + Lab	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 210, 211, 250, Linear Algebra	PHYS 210, 211	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 210, 211, 250, Linear Algebra	PHYS 210, 211 Or CHEM 120 + Lab,CHEM 121 + Lab 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.	MATH 210, 211, Linear Algebra	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.

## Electrical Engineering

Degree Program	МАТН	PHYSICS	COMPUTER PROGRAMMING
Electrical Engineering	MATH 210, 211, 250, PHYS 320	PHYS 210, 211, 312	MATLAB

#### Industrial & Systems Engineering

Degree Program	MATH	CHEMISTRY	PHYSICS	COMPUTER PROGRAMMING
Industrial & Systems Engineering (Information Systems), B.S.	MATH 210, 211, 250,	CHEM 120 +	PHYS 210, 211	C++
ndustrial & Systems ngineering, (Operations) B.S.		Lab	1110 210, 211	