

## **Program Overview**

This agreement establishes a plan whereby an undergraduate student will attend Westminster College of Salt Lake City 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 Westminster College of Salt Lake City 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 Westminster College of Salt Lake City

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

## Residency

It is expected that students applying for this program have attended Westminster College of Salt Lake City 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 Westminster College of Salt Lake City 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 Westminster College of Salt Lake City 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 Westminster College of Salt Lake City. 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 Westminster College of Salt Lake City, 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 Westminster College of Salt Lake City 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 Westminster College of Salt Lake City 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 Westminster College of Salt Lake City 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.



# Westminster College of Salt Lake City 3+2 Program Student Guide

Below are the courses students should take at Westminster College of Salt Lake City 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<br>COURSES* | COMPUTER<br>PROGRAMMING |
|---|------------------------------|-------------|---|------------------------|-------------------------|
| Aerospace<br>Engineering, B.S.<br>Mechanical<br>Engineering, B.S. | MATH 201,<br>202, 203, 211 + | CHEM 111    | PHYS 211 + 212,<br>PHYS II: Electricity<br>& Magnetism, | Statics<br>Dynamics    | MATLAB                  |
| Mechanical<br>Engineering<br>(Petroleum) , B.S.                   | 363                          | 363 PH<br>M |   | Dynamics               |                         |

#### Astronautical Engineering

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

| Degree Program                     | MATH                             | CHEMISTRY | PHYSICS   | ADDITIONAL<br>COURSES* | COMPUTER<br>PROGRAMMING |
|------------------------------------|----------------------------------|-----------|---|------------------------|-------------------------|
| Astronautical<br>Engineering, B.S. | MATH 201, 202,<br>203, 211 + 363 | CHEM 111  | PHYS 211 + 212,<br>PHYS II: Electricity<br>& Magnetism,<br>PHYS III: Optics &<br>Modern Physics | 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<br>PROGRAMMING |
|---|-------------------------|-------------------------------------|----------------------------------|-------------------------|
| Biomedical Engineering,<br>B.S.                   | CHEM 111, 112, 303, 304 |                                     | MATH 201, 202, 203,<br>211 + 363 | MATLAB                  |
| Biomedical Engineering (Molecular-Cellular), B.S. | CHEM 111, 112, 303, 304 | PHYS 211 + 212,                     |                                  |                         |
| Biomedical Engineering<br>(Electrical), B.S       | CHEM 111, 112, 303      | PHYS II: Electricity<br>& Magnetism |                                  |                         |
| Biomedical Engineering<br>(Mechanical), B.S.*     | CHEM 111, 112, 303      |                                     |                                  |                         |

\*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<br>PROGRAMMING |
|---|-------------------------|---|----------------------------------|-------------------------|
| Chemical Engineering, B.S.                                    | CHEM 111, 112, 303, 304 |   |                                  |                         |
| Chemical Engineering<br>(Biochemical), B.S.                   | CHEM 111, 112, 303      |   |                                  |                         |
| Chemical Engineering<br>(Environmental), B.S.                 | CHEM 111, 112, 303      |   |                                  |                         |
| Chemical Engineering<br>(Nanotechnology), B.S.                | CHEM 111, 112, 303      | PHYS 211 + 212, PHYS<br>II: Electricity & | MATH 201, 202, 203,<br>211 + 363 | MATLAB                  |
| Chemical Engineering<br>(Petroleum), B.S.                     | CHEM 111, 112, 303      | Magnetism                                 |                                  |                         |
| Chemical Engineering<br>(Polymers/Materials<br>Science), B.S. | CHEM 111, 112, 303, 304 |   |                                  |                         |
| Chemical Engineering<br>(Sustainable Energy), B.S.            | CHEM 111, 112, 303, 304 |   |                                  |                         |



#### 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<br>Courses                               | PHYSICS                             | MATH                             | COMPUTER<br>PROGRAMMING |
|---|--|-----------------------|---|-------------------------------------|----------------------------------|-------------------------|
| Civil Engineering,<br>B.S.                      | N/A  | CHEM 111              | Statics,<br>Strength of<br>Materials, &<br>Dynamics | PHYS 211 + 212,                     | MATH 201, 202,<br>203, 211 + 363 | MATLAB                  |
| Civil Engineering<br>(Construction), B.S.       | N/A  | CHEM 111              | Statics,<br>Strength of<br>Materials, &<br>Dynamics |                                     |                                  |                         |
| Civil Engineering<br>(Water Resources),<br>B.S. | N/A  | CHEM 111              | Statics,<br>Strength of<br>Materials, &<br>Dynamics |                                     |                                  |                         |
| Civil Engineering<br>(Environmental),<br>B.S.   | General Biology<br>II: Cell Biology<br>& Physiology +<br>lab | CHEM 111,<br>112      | Statics,<br>Strength of<br>Materials, &<br>Dynamics | PHYS II: Electricity<br>& Magnetism |                                  |                         |
| Civil Engineering<br>(Structural), B.S.         | N/A  | CHEM 111              | Statics,<br>Strength of<br>Materials, &<br>Dynamics |                                     |                                  |                         |
| Environmental<br>Engineering, B.S.*             | General Biology<br>II: Cell Biology<br>& Physiology +<br>lab | CHEM 111,<br>112, 303 | 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<br>Engineering/Computer<br>Science, B.S. * | MATH 201, 202, 203, MATH<br>204 or 211 + 363 | PHYS 211 + 212, PHYS II:<br>Electricity & Magnetism  | Students are strongly recommended to<br>take a C++ programming course. Doing<br>so may help prepare them to take the<br>Comp. Sci. Department's Challenge Exam<br>upon enrollment at USC. |
| Computer Science, B.S.                              | MATH 201, 202, 203, MATH<br>204 or 211 + 363 | PHYS 211 + 212, PHYS II:<br>Electricity & Magnetism<br>Or<br>CHEM 111, 112<br>Or<br>BIOL 106 | Students are strongly recommended to<br>take a C++ programming course. Doing<br>so may help prepare them to take the<br>Comp. Sci. Department's Challenge Exam<br>upon enrollment at USC. |
| Computer Science (Games),<br>B.S.                   | MATH 201, 202, MATH 204<br>or 211 + 363      | PHYS 211 + 212   | Students are strongly recommended to<br>take a C++ programming course. Doing<br>so may help prepare them to take the<br>Comp. Sci. Department's Challenge Exam<br>upon enrollment at USC. |

#### **Electrical Engineering**

| Degree Program         | МАТН                             | PHYSICS   | COMPUTER<br>PROGRAMMING |
|------------------------|----------------------------------|---|-------------------------|
| Electrical Engineering | MATH 201, 202, 203, 211 +<br>363 | PHYS 211 + 212, PHYS II:<br>Electricity & Magnetism, PHYS<br>III: Optics & Modern Physics | MATLAB                  |

#### Industrial & Systems Engineering

| Degree Program   | MATH | CHEMISTRY | PHYSICS   | COMPUTER<br>PROGRAMMING |
|--|------|-----------|---|-------------------------|
| Industrial & Systems<br>Engineering (Information<br>Systems), B.S.<br>Industrial & Systems<br>Engineering, (Operations) B.S. |      | CHEM 111  | PHYS 211 + 212, PHYS II:<br>Electricity & Magnetism | C++                     |