Pre-engineering at Florida Southern

Florida Southern College (FSC) provides students interested in a career in engineering the opportunity to combine its comprehensive liberal arts education with a rigorous, highly prestigious engineering program at Washington University in St. Louis (WUSTL) through a 3-2 (or 4-2) Dual Degree Program! Successful completion of this combined liberal arts / engineering program results in two earned baccalaureate degrees: one from FSC and one from WUSTL's School of Engineering & Applied Science.

Participating students may pursue any degree at FSC and enter WUSTL after their junior (3-2 program) or senior (4-2 program) year.

Liberal Arts at FSC	Engineering at WUSTL
Mathematics Computer Science Chemistry Biochemistry/Molecular Biology Biology *... and more. See full list of majors*	Biomedical Engineering Chemical Engineering Computer Engineering Computer Science Electrical Engineering Mechanical Engineering Systems Science & Engineering

Why Pursue a Dual Degree?

Dual Degree students receive **two degrees**, and with them the all the strengths and benefits of both a liberal arts education that emphasizes effective communication and problem solving skills founded in the humanities, the arts, and the sciences and a highly technical engineering education.

Other advantages include:

- Guaranteed entrance into WUSTL's School of Engineering (** if admission requirements met. *See requirements below.*)
- Two college experiences at two very unique, historic institutions
- Small class sizes and student/faculty ratios typical at a Florida Southern
- Opportunities to combine interests in various disciplines
- More competitive placements in engineering upon graduation due to liberal arts background.

Program Requirements

Participating students will fulfill all major and general education requirements at FSC prior to entering WUSTL. In addition, all Dual Degree students at FSC, regardless of major, must satisfy the following engineering pre-requisites before entering WUSTL: *Principles of Chemistry I* (CHE1111), *Programming and Data Structures I* (CSC2231), *Calculus I, II, and III* (MAT2311, MAT2312, MAT3313), *Differential Equations* (MAT3350), and *General Physics I, II (Calculus Based)* (PHY2010, PHY2020). (*Additional pre-requisites may apply for select engineering programs, such as Chemical Engineering, Biomedical Engineering, Computer Science, and Computer Engineering*). All other humanities pre-requisites are fulfilled by the general education curriculum at FSC. A minimum GPA of 3.25/4.00 is required, both overall and in all science and mathematics pre-requisites.

For more information regarding the Dual Degree Program in engineering at FSC, including admission requirements or FSC major requirements, please contact Dr. Jason Montgomery (jmontgomery@flsouthern.edu). For more information regarding Washington University in St. Louis, visit the links below.

Links to WUSTL

Washington University in St. Louis
Engineering at Washington University
Dual Degree Program at WashU

Washington University in St. Louis
School of Engineering & Applied Science

Engineering Dual Degree Program
2013-2014

Course Requirements

These are the core requirements for all undergraduate professional engineering study, which should be completed before entry into WashU.

- **Chemistry:** one semester of general chemistry with lab
    - **Principles of Chemistry I**
- **Computer Programming:**
    - one course or certified proficiency in a high-level language (MATLAB experience is helpful for Biomedical Engineering, Chemical Engineering and Mechanical Engineering majors)
- **English Composition:** one course, acceptable examination scores, or college certification of proficiency
- **Humanities & Social Sciences:** no fewer than 15 semester hours in approved areas (This sequence must include at least six semester hours in Humanities and three semester hours in Social Sciences).
    - **Social Sciences** (Sociology, psychology)
    - **Humanities (**Fine arts, English, Philosophy, etc.)
- **Mathematics:**
    - Calculus I-III (a calculus sequence which includes exposure to multivariable calculus)
    - Differential Equations
- **Physics:** one-year calculus-based sequence with lab
    - **PHY 2110 and PHY 2120 with their labs**
- **Total Credits:** a minimum of 90 semester hours of transferable college credit (courses with grades below C- do not transfer)

Department-specific requirements

- **Biomedical Engineering:** a one-year biology sequence that covers cellular, molecular and developmental biology and genetics and a second semester of general chemistry with lab
- **Chemical Engineering:** one semester of biology that covers cellular, molecular and developmental biology, a second semester of general chemistry with lab, and one semester of organic chemistry with lab (a second semester of organic chemistry, physical chemistry, and a course on energy and environment from a scientific point of view are strongly recommended)
- **Computer Science & Computer Engineering:** a second computer programming course

A GPA of B+ (**3.25/4.0**) or better, both overall and in **science and mathematics** courses is required for admission to the Dual Degree Program. Applicants with lower GPAs are considered on a case-by-case basis; please have your liaison officer write a letter of support.

Apply

Applications are typically submitted during the winter of a student's junior or senior year at an affiliated institution. Application deadline is February 28. There is no application fee. Do not apply using the Common Application.

Admissions Checklist

- **Institutional Endorsement Certifying Aptitude for Engineering Study and Receipt of a Second Degree**
  The Dual Degree liaison officer at your current institution must certify aptitude for engineering study, which he or she will be requested to do after you submit your Online Application. This will attest you are expected to complete a bachelor's level, non-engineering degree at your current institution no later than receipt of the engineering degree from WashU.