

# 3+2 Engineering Program



WASHINGTON  
& JEFFERSON  
COLLEGE

The Engineering and Applied Science Dual-Degree Program allows students to:

- **begin their studies in an supportive liberal-arts environment**, building a core of foundational science, mathematics, and oral- and written-communication skills;
- **complete an engineering major** at one of our world-class partner institutions; and
- **earn two degrees** - a Bachelor of Arts from W&J in any field of their choosing and a Bachelor of Science in an engineering or applied-science field from a partner school.

## Program Features

- Students may choose any of W&J's 30+ academic majors.
- Students work closely with W&J faculty to develop quantitative and problem-solving skills, as well as the communication skills and broad perspective necessary to be effective in modern engineering fields.
- With a flexible completion schedule, students may spend three or four years at W&J, but most students complete the program in 3+2 years.
- Washington University (St. Louis) offers a 3+3 track, which results in students earning a Bachelor of Science and Master of Science in engineering.

## Program Requirements

To qualify for the program, students must:

- complete at least six semesters of study at W&J;
- complete a W&J major, as well as W&J's general-education requirements;
- complete a set of engineering prerequisite courses, primarily in math and science; and
- meet the minimum GPA requirements (between 3.0 and 3.3, depending on partner school), both overall and in engineering prerequisite courses.

Core pre-engineering courses taken at W&J include:

- General Physics I with lab (PHY 107)
- General Physics II with lab (PHY 108)
- Calculus I (MTH 151 )
- Calculus II (MTH 152)
- Multivariable Calculus (MTH 208)
- Differential Equations (MTH 308)
- Intro. to Comp. for Physical Sciences (Python) (PHY 220) OR Intro. to Programming (Java) (CIS 220)
- Organic Chemistry: Structure and Fundamentals with lab (CHM 160)
- Intro. to Inorganic Chemistry with lab (CHM 260)

## Partner Institutions

- Case Western Reserve University (Cleveland)
- Columbia University's Fu Foundation School of Engineering and Applied Science (New York City)
- University of Pittsburgh's Swanson School of Engineering (Pittsburgh)
- Washington University's McKelvey School of Engineering (St. Louis)

## Program Director

Michael McCracken, Ph.D.  
mmcracken@washjeff.edu

# Beyond the Classroom

Students have many opportunities for research, internships, conferences and networking beyond the classroom that give them an advantage to prepare for life after W&J.

## Areas of Study

Our partner schools offer a wide range of engineering and applied-science disciplines that includes:

- software and computer engineering
- mechanical and aerospace engineering
- electrical engineering
- chemical engineering
- civil engineering
- environmental engineering
- data science
- applied physics
- applied mathematics
- computer science

## Internships and Alumni Employment

Students complete their studies in a world-class technical university, taking advantage of research opportunities, internships and career placements. Recent alumni include:

- Krista Sudar '22, physics - B.S. in mechanical engineering and M.S. in aerospace engineering; internship at Johns Hopkins University Applied Physics Lab
- Kripa George '22, physics - B.S. and M.S. in computer engineering; internship at ThermoFisher
- Ty Bedillion '22, physics - B.S. in mechanical engineering and M.S. in engineering management; job as an integration and test engineer at Boeing
- Matthew Prezioso '21, physics - B.S. in mechanical engineering; job as an energy engineer at DAI Management Consultants
- Tucker Burg '20, chemistry - graduate degree in chemical engineering; job as a process engineer at Jacobs
- Blynn Shideler '19, physics and French - graduate degree in engineering; research internships at Université Paris Descartes, Hangzhou Dianzi University and Victoria University; internships at the National Institutes of Health and Stanford Medical School



## Program Website

[washjeff.edu/engineering-and-applied-science-dual-degree-programs](http://washjeff.edu/engineering-and-applied-science-dual-degree-programs)

