

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
- earn two degrees - a B.A. from W&J in any field of their choosing and a B.S. 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.
- Completion schedule is flexible; students may spend either three or four years at W&J. Most students complete the program in 3+2 years.
- Washington University in St. Louis also offers a 3+3 track, which results in the student earning B.S. and M.S. degrees 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
- meet 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, OH)
- Columbia University's Fu Foundation School of Engineering and Applied Science (New York, NY)
- University of Pittsburgh's Swanson School of Engineering (Pittsburgh, PA)
- Washington University in St. Louis' McKelvey School of Engineering (St. Louis, MO)

Program Director

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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, including:

- 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 the research opportunities, internships and career-placement. Some recent alumni include:

- Krista Sudar ('22). Physics major at W&J. B.S. in Mechanical, M.S. in Aerospace Engineering at WashU in St. Louis. Internships at Johns Hopkins Applied Physics Lab. Discovery Program Staff at Johns Hopkins University.
- Kripa George ('22). Physics major at W&J. B.S. and M.S. in Computer Engineering at WashU in St. Louis. ML/AI Intern at ThermoFisher.
- Ty Bedillion ('22). Physics major at W&J. B.S. in Mechanical Engineering, M.S. in Engineering Management at WashU in St. Louis. Integration and Test Engineer at Boeing.
- Matthew Prezioso ('21). Physics major at W&J. B.S. in Mechanical Engineering at CWRU. Energy Engineer at DAI Management Consultants, Inc.
- Tucker Burg ('20). Chemistry major at W&J. Chemical Engineering at Columbia. Star pitcher on baseball team. Process Engineer at Jacobs.
- Blynn Shideler ('19). Physics and French majors at W&J. Biomedical engineering at Columbia. Research internships at Université Paris Descartes, Hangzhou Dianzi University, and Victoria University. Internship at National Institutes of Health. Stanford Medical School.



Program Website

washjeff.edu/engineering-and-applied-science-dual-degree-programs

