DUAL DEGREE ENGINEERING 3+2 PATHWAY WITH WASHINGTON UNIVERSITY

Program Overview

The Dual Degree Engineering program is where students earn a bachelor's degree at Drake University and an engineering degree at Washington University in St. Louis, MO within 5 years. Students take all the general education courses at Drake University as well as three years of courses in the major of their choice following the B.S. or B.A. curricula and then, upon satisfactory completion of the coursework, transfer to Washington University to finish a program in an engineering field of their choice. Students will transfer back courses from Washington University to complete their Drake University degree. With advisor approval, some of the courses from Washington University could count towards their Drake University degree. At the end they acquire two Bachelor's degrees: one from Drake University and one in Engineering from Washington University. Undergraduate engineering fields at Washington University include biomedical, chemical, computer, electrical, environmental, mechanical, and systems science.

A Master's degree option is also available through Washington University, with even further specializations. At least one extra year will be required at Washington University to complete an additional Master's degree.

Students can opt to stay at Drake for three or four years, and opt to stay at Washington University for two years for the undergraduate degree, or three for the Master's degree in Engineering. Academic plans are individualized based on a student's major at Drake and the engineering path at Washington University, in consultation with the college offices and student's academic advisors. Students who wish to have financial aid at both institutions will have to earn both degrees simultaneously, so the awarding of the Drake degree will not occur until the Washington University degree is completed. All Drake Curriculum requirements (First Year Seminar, Areas of Inquiry/Honors, Diversity, Equity and Inclusion designated course, , non-transferrable major required courses, and Upper-Level Hours (at least 40 credits of courses numbered 100 and above) must be completed before transferring to Washington University.

Admission to Washington University is based on a cumulative 3.25 GPA and a science/math 3.25 GPA, earning at least 90 credit hours, and completing the core requirements below. Certain engineering programs have additional requirements to be admitted to the program. For more admissions information for Washington University, and more information about the Washington University program, please go to their website: Dual Degree Program | McKelvey School of Engineering at Washington University in St. Louis (wustl.edu) (https://engineering.wustl.edu/academics/dual-degree-program/)

Required Courses

During the first three years, 3+2 Dual Degree Engineering participants must take the following basic science core courses, then optional secondary courses based on engineering interests.

Code	Title	Hours
Basic Science Core		
MATH 050	CALCULUS I	3
MATH 070	CALCULUS II	3
MATH 080	LINEAR ALGEBRA	3
MATH 100	CALCULUS III	3
MATH 110	MULTIVARIATE CALCULUS	3
MATH 120	APPLIED DIFFERENTIAL EQUATIONS I	3
MATH 121	APPLIED DIFFERENTIAL EQUATIONS II	3
CHEM 001	GENERAL CHEMISTRY I	3
CHEM 003	GENERAL CHEMISTRY I LAB	1
CS 065	INTRODUCTION TO COMPUTER SCIENCE I	3
PHY 001	INTRODUCTION TO PHYSICS I	4
PHY 002	INTRODUCTION TO PHYSICS II	4
Complete all requirements for a major		Varies
Complete all Drake Curriculum requirements (AOIs, Honors, First Year Seminar, Diversity, Equity and Inclusion designated course, Capstone, 40 upper-level credits.)		
Electives at the undergraduate level		Varies
Biomedical Engineering additional requirements		
BIO 012	GENERAL/PRE-PROFESSIONAL BIOLOGY I	3
BIO 012L	GENERAL/PRE-PROFESSIONAL BIOLOGY I LAB	1
CHEM 002	GENERAL CHEMISTRY II	3
CHEM 004	GENERAL CHEMISTRY II LAB	1
Chemical Engineering additional requirements [1]		
BIO 012	GENERAL/PRE-PROFESSIONAL BIOLOGY I	3
BIO 012L	GENERAL/PRE-PROFESSIONAL BIOLOGY I LAB	1
CHEM 002	GENERAL CHEMISTRY II	3
CHEM 004	GENERAL CHEMISTRY II LAB	1
CHEM 097	ORGANIC CHEMISTRY I	3
CHEM 098	ORGANIC CHEMISTRY I LAB	1
CHEM 108	ORGANIC CHEMISTRY II (Recommended)	3
CHEM 110	ORGANIC CHEMISTRY II LAB (Recommended)	1
Environmental Engineering additional requirements		
BIO 012	GENERAL/PRE-PROFESSIONAL BIOLOGY I	3
BIO 012L	GENERAL/PRE-PROFESSIONAL BIOLOGY I LAB	1
CHEM 002	GENERAL CHEMISTRY II	3
CHEM 004	GENERAL CHEMISTRY II LAB	1
CHEM 097	ORGANIC CHEMISTRY I	3
CHEM 098	ORGANIC CHEMISTRY I LAB	1
Mechanical and Electrical Engineering recommended courses [2]		
PHY 050	MODERN PHYSICS	4
PHY 059	ADVANCED LAB I & ERROR THEORY	2
PHY 121	THEORETICAL MECHANICS	4
PHY 122	ELECTROMAGNETIC THEORY	4
PHY 133	ELECTRONICS (with lab)	4
PHY 149	ADVANCED LAB II	2

1 Students pursuing the Chemical Engineering pathway are highly recommended to be a Chemistry major (https://catalog.drake.edu/undergraduate/arts-sciences/areas-study/chemistry/).

2 Students pursuing the Mechanical and Electrical Engineering pathway are highly recommended to be a physics major (https://catalog.drake.edu/undergraduate/arts-sciences/areas-study/physics/).

Students may transfer courses from Washington University towards their Drake University majors based on advisor approval. Students must

complete their capstone before transferring to Washington University, if their major requires a capstone.

The requirements above are the **bare minimum** requirements to be accepted into the program (unless noted as recommended). Students should allow flexibility for courses that can supplement their foundational knowledge in the engineering programs of their choice before transferring to Washington University. Since this is an accelerated program, students will need to be particularly proactive in degree planning with their advisors in order to meet Drake University degree requirements, Washington University pre-requisites, and foundational classes that will help support career interests.