DEPAUW UNIVERSITY

Department of Physics and Astronomy
Pre-Engineering Requirements
(Last Revised: 10.30.2020)

♦ 23 courses in six semesters for the three-year option
♦ In addition to DePauw's requirements, students must satisfy the requirements of the chosen engineering school.
♦All students must complete…

MATH 363 Differential Equations	CSC 121 Computer Science I
PHYS 120 Principles of Physics I	PHYS 130 Principles of Physics II
CHEM 130 Structure & Properties of Inorganic Molecules	

♦Additional science course requirements vary with the chosen engineering field
♦The minimum GPA for automatic transfer to Washington University is 3.25

Schools

♦DePauw has formal agreements with 3 engineering schools…

Columbia University, New York, NY

Washington University, St. Louis, MO

Case Western Reserve University, Cleveland, OH

♦These agreements enable students to earn both the B.A. from DePauw University and the B.S. in Engineering after a 5-year course of study. Normally, this includes 3 years at DePauw and 2 years at the engineering school.
♦The specific DePauw courses expected for students going to Columbia University are on the reverse side.
♦Washington University offers several programs

Biomedical	Chemical Engineering	Computer Science
Computer Engineering	Electrical Engineering	Mechanical Engineering
Systems Science Engineering		

♦Washington University offers sample curricula of each of their programs and those can be found on our website at http://www.depauw.edu/academics/departments-programs/physics-astronomy/majors--minors/pre-engineering/
♦Other options, including the 4-2 program leading to a either a bachelor's or master's degree in engineering, are available. Washington University offers a +3 year option that leads to a B.S. in a chosen field plus a M.S. degree. Prospects for transfer to other engineering schools with which DePauw does not have a formal agreement should be discussed with the pre-engineering adviser Professor Howard Brooks

Columbia University Pre-Engineering Requirements
(Last Revised: 10.30.2020)

Foundation Courses:

MATH 151	Calculus I		PHYS 120	Principles of Physics I
MATH 152	Calculus II		PHYS 130	Principles of Physics II
MATH 251	Calculus III		CSC 121	Computer Science I
CHEM 130	Structure and Properties of Inorganic Molecules			
ECON 100	Introduction to Economics			
FYS	Your choice			

Major – Specific Coursework

Applied Mathematics or Applied Physics:

MATH 363 Differential Equations
PHYS 210 or 220
BIO 145 Ecology and Evolution
BIO 215 Cell and Genes

Biomedical Engineering:
PHYS 210/220
CHEM 120 Struc & Prop of Organic Mol

Chemical Engineering:
MATH 363 Differential Equations
MATH 270 Linear Algebra
CHEM 120 Struc & Prop of Organic Mol
CHEM 260 Therm/Equil/Kinetics

Civil Engineering:
MATH 270 Linear Algebra
MATH 363 Differential Equations

Computer Engineering:
MATH 270 Linear Algebra
MATH 363 Differential Equations

Computer Science:
CSC 122 Data Structures
MATH 123 Computational Discrete Math

Earth and Environmental Engineering:
MATH 270 Linear Algebra
MATH 363 Differential Equations
CHEM 120 Struc & Prop of Organic Mol
CHEM 260 Therm/Equil/Kinetics
PHYS 210/220
BIO 215 Cell and Genes

Electrical Engineering:
MATH 270 Linear Algebra
MATH 363 Differential Equations
PHYS 210/220
PHYS 231 Statics & PHYS 351 Dynamics

IEOR*:
MATH 270 Linear Algebra
MATH 247 Mathematical Statistics
MATH 441 Probability
CSC 122 Data Structures
ECON 220 Financial Accounting

Materials Science and Engineering:
MATH 363 Differential Equations
PHYS 210/220
CHEM 120 Struc & Prop of Organic Mol

Mechanical Engineering:
BIO 215 Cell and Genes
BIO 145 Ecology and Evolution
MATH 270 Linear Algebra
MATH 363 Differential Equations
PHYS 210/220
PHYS 231 Statics & PHYS 351 Dynamics

*IEOR – Industrial Engineering, Engineering Management Systems, or Operations Research