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
  PHYS 120 Principles of Physics I
  CHEM 130 Structure & Properties of Inorganic Molecules
  CSC 121 Computer Science I
  PHYS 130 Principles of Physics II
♦ 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
- MATH 152 Calculus II
- MATH 251 Calculus III
- 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