Pursue your interests

Civil Engineering students at UD have some flexibility in designing a curriculum to meet their needs and interests. After laying a strong foundation in math, science, and engineering through required courses, students may begin taking technical electives in one of the main focus areas—structural, geotechnical, environmental, water resources, transportation, railroad, or ocean and coastal engineering. Minors in civil engineering, environmental engineering, sustainable infrastructure, and environmental sustainability are also offered.

Active research ensures that the content of the undergraduate program is constantly renewed and maintained at a challenging technical level and integrates discovery learning into the program. Opportunities abound for civil engineering undergraduates to work with faculty and graduate students as research assistants, either for pay or independent study credit. Research in the department covers a broad range of topics with particular strengths in bridge design, construction, evaluation, and rehabilitation; applications of composite materials to concrete, steel, and earth structures; computer modeling of wave/shoreline interactions; intelligent transportation systems; management and operation of civil infrastructure systems; remediation of contaminated soil and groundwater; and biodegradation of wastes.
Civil Engineering Curriculum:

To earn a bachelor’s degree, students must complete 126 credits and meet specific requirements as outlined in the online catalog. See UD Catalog for additional details.

FIRST YEAR

FALL
EGGG 101 - Introduction to Engineering (FYE)
CHEM 103 - General Chemistry
MATH 241 - Analytic Geometry & Calculus A
CISC 106 - General Computer Science for Engineers
Breadth Requirement Elective 1

SPRING
CIEG 161 - Freshman Design
Natural Science Elective
MATH 242 - Analytic Geometry & Calculus B
ENGL 110 - Seminar in Composition
Breadth Requirement Elective 2

SECOND YEAR

FALL
CIEG 211 - Statics
PHYS 207 - Fundamentals of Physics I
MATH 243 - Analytic Geometry & Calculus C
COMM 212 - Oral Communication in Business
Breadth Requirement Elective 3

SPRING
CIEG 212 - Solid Mechanics
CIEG 213 - Civil Engineering Materials Lab
CIEG 311 - Dynamics
MSEG 302 - Materials Science for Engineers
MATH 351 - Engineering Mathematics I
Breadth Requirement Elective 4

THIRD YEAR

FALL
CIEG 301 - Structural Analysis
CIEG 320 - Soil Mechanics
CIEG 323 - Soil Mechanics Laboratory
CIEG 305 - Fluid Mechanics
CIEG 306 - Fluid Mechanics Laboratory
MATH 353 - Engineering Mathematics III

SPRING
CIEG 302 - Structural Design
CIEG 321 - Geotechnical Engineering
CIEG 331 - Environmental Engineering
CIEG 351 - Transportation Engineering
CIEG 451 - Transportation Engineering Lab
CIEG 315 - Probability and Statistics for Engineers

FOURTH YEAR

FALL
CIEG 461 - Senior Design Project (DLE)
CIEG 486 - Engineering Project Management
CIEG 440 - Water Resources Engineering
ENGL 410 - Technical Writing
Technical Elective 1

SPRING
CIEG 461 - Senior Design Project (DLE)
Technical Elective 2
Technical Elective 3
Breadth Requirement Elective 5
Breadth Requirement Elective 6