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
- 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
- (Breadth Requirement 5)
- Technical Elective 1

SPRING
- CIEG 461 - Senior Design Project (DLE)
- Technical Elective 2
- Technical Elective 3
- Technical Elective 4
- Breadth Requirement Elective 6

Two degrees at once

Well-qualified civil engineering majors may apply to the 4+1 program to earn a bachelor’s degree in Civil Engineering (BCE) and a Master of Civil Engineering (MCE) degree within 5 years.

Real-world experience

An optional co-op program provides students the opportunity to gain valuable experience working in the profession while completing their degree. With careful planning and proper selection of courses, students can work full-time for up to 26 weeks and still graduate in four years.

Course topics you may explore:

- Structural engineering
- Geotechnical engineering
- Environmental engineering
- Water resources
- Transportation
- Railroad engineering
- Ocean & coastal engineering and more!

Contact us:

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