Endless Career Opportunities
Chemical engineering deals with the physical, chemical and biological transformations of matter that are the basis for making useful products. With its emphasis on problem-solving skills, quantitative analysis and teamwork, a chemical engineering education provides an excellent foundation for future careers in medicine, law, business, consulting and management. Graduates of our program are hired by an ever-broadening array of employers, including companies in the biotechnology, semiconductor, management consulting, and pharmaceutical industries, in addition to a variety of small start-up companies and the traditional chemical process industry.

Top-ranked program
U.S. News and World Report consistently ranks UD’s chemical engineering program among the top ten in the nation. We cultivate graduates who actively seek to provide technical, educational, public sector and/or business leadership in a rapidly changing, increasingly technological, global society and who recognize their professional responsibility toward the betterment of our community. Our faculty maintain an environment that enables students to identify and pursue their personal and professional goals within an innovative educational program that is rigorous and challenging as well as flexible and supportive.
### Chemical 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 111 - General Chemistry
- MATH 242 - Analytic Geometry & Calculus B
- CISC 106 - General Computer Science for Engineers
- ENGL 110 - Seminar in Composition

**SPRING**
- CHEG 112 - Introduction to Chemical Engineering
- CHEM 112 - General Chemistry
- MATH 243 - Analytic Geometry & Calculus C
- PHYS 207 - Fundamentals of Physics I
- Breadth Requirement Elective 1

#### SECOND YEAR

**FALL**
- CHEG 231 - Chemical Eng Thermodynamics
- CHEM 220 - Quantitative Analysis
- CHEM 221 - Quantitative Analysis Laboratory
- PHYS 208 - Fundamentals of Physics II
- MSEG 302 - Materials Science for Engineers
- Breadth Requirement Elective 2

**SPRING**
- CHEG 304 - Random Variability in Chemical Processes
- CHEG 325 - Chemical Eng Thermodynamics
- CHEM 444 - Physical Chemistry
- CHEM 445 - Physical Chemistry Laboratory
- MATH 305 - Applied Math for Biomed, Chem & Biomol Eg
- Breadth Requirement Elective 3

#### THIRD YEAR

**FALL**
- CHEG 332 - Chemical Engineering Kinetics
- CHEG 341 - Fluid Mechanics
- CHEM 331 - Organic Chemistry
- CHEM 333 - Organic Chemistry Lab I (lecture only)
- Technical Elective 1
- Technical Elective 2

**SPRING**
- CHEG 342 - Heat and Mass Transfer
- CHEG 345 - Chemical Engineering Laboratory I
- CHEM 332 - Organic Chemistry or CHEG Elective 4
- CHEM 527 - Introduction to Biochemistry
- CHEG Elective I
- Breadth Requirement Elective 4

#### FOURTH YEAR

**FALL**
- CHEG 401 - Chemical Process Dynamics and Control
- CHEG 431 - Chemical Process Analysis
- CHEG 445 - Chemical Engineering Laboratory II
- CHEG Elective 2
- Breadth Requirement Elective 5

**SPRING**
- CHEG 432 - Chemical Process Analysis (DLE)
- CHEG Elective 3
- Technical Elective 3
- Technical Elective 4 or CHEG Elective 4
- Breadth Requirement Elective 6

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**Research opportunities**

Our undergraduates benefit from the active research programs in the department. Ongoing cutting edge research ensures that the content of the undergraduate program is constantly renewed and maintained at a challenging technical level and that discovery learning is integrated into the program. In addition, our undergraduates can work with faculty and graduate students as research assistants, for pay or credit during the academic year or the summer months. More than 75% of our graduating seniors have participated in some type of research experience.

**Course topics you will explore:**

- New energy technology
- Catalysis and reactions
- Colloids and interfaces
- Systems biology
- Materials, polymers, and composites
- Thermodynamics; and transport and separations and more!

**Contact us:**

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