ENVIRONMENTAL ENGINEERING DEGREE

Students must also complete the Undergraduate Registration Requirement (https://catalogs.northwestern.edu/undergraduate/requirements-policies/undergraduate-registration-requirement/) and the degree requirements of their home school.

Requirements (48 units)

Core Courses (27 units)

4 mathematics courses (https://catalogs.northwestern.edu/undergraduate/engineering-applied-science/#requirementstext)

4 units of basic science:
- PHYSICS 135-2 & PHYSICS 136-3: General Physics and General Physics Laboratory
- or PHYSICS 125-2 & PHYSICS 126-2: General Physics for ISP and Physics Laboratory for ISP
- or PHYSICS 140-2 & PHYSICS 136-2: Fundamentals of Physics and General Physics Laboratory
- CHEM 131-0 & CHEM 132-0 & CHEM 141-0 & CHEM 142-0: Fundamentals of Chemistry I and Fundamentals of Chemistry II and Fundamentals of Chemistry Laboratory I and Fundamentals of Chemistry Laboratory II
- or CHEM 151-0 & CHEM 152-0 & CHEM 161-0 & CHEM 162-0 & CHEM 171-0 & CHEM 172-0 & CHEM 181-0 & CHEM 182-0: General Chemistry I and General Chemistry II and General Chemistry Laboratory I and General Chemistry Laboratory II and Advanced General Inorganic Chemistry and Advanced General Physical Chemistry and Advanced General Inorganic Chemistry Laboratory and Advanced General Physical Chemistry Laboratory

4 engineering analysis and computer proficiency courses (https://catalogs.northwestern.edu/undergraduate/engineering-applied-science/#requirementstext)

3 design and communications courses (https://catalogs.northwestern.edu/undergraduate/engineering-applied-science/#requirementstext)

7 social sciences/humanities courses (https://catalogs.northwestern.edu/undergraduate/engineering-applied-science/#requirementstext)

5 unrestricted electives (https://catalogs.northwestern.edu/undergraduate/engineering-applied-science/#requirementstext)

Major Program (21 units)

3 gateway courses
- CIV_ENV 201-0: Engineering Possibilities: Decision Science in the Age of Smart Technologies
- CIV_ENV 202-0: Biological and Ecological Principles
- CIV_ENV 203-0: Earth in the Anthropocene

5 basic engineering courses
- BMD_ENG 250-0: Thermodynamics
- or CHEM_ENG 211-0: Thermodynamics
- CIV_ENV 304-0: Civil and Environmental Engineering Systems Analysis
- CIV_ENV 306-0: Uncertainty Analysis
- MAT_SCI 201-0: Introduction to Materials Science and Engineering Principles

8 environmental engineering core courses
- CHEM 215-1: Organic Chemistry I
- CIV_ENV 260-0: Environmental Systems and Processes
- CIV_ENV 340-0: Hydraulics and Hydrology
- CIV_ENV 361-1: Environmental Microbiology
- CIV_ENV 346-0: Ecohydrology
- CIV_ENV 364-0: Sustainable Water Systems
- CIV_ENV 365-0: Environmental Laboratory
- CIV_ENV 367-0: Chemical Processes in Aquatic Systems

2 capstone design courses (0.5 units each)
- CIV_ENV 382-1 & CIV_ENV 382-2: Capstone Design I and Capstone Design II

4 technical elective courses
- CIV_ENV 301-1: Professional Development Seminar I

1 professional development course (0.34 units)

1 See general requirements (https://catalogs.northwestern.edu/undergraduate/engineering-applied-science/#requirementstext) for details.

2 From an approved list (available in Undergraduate CIV_ENV Handbook) in engineering, mathematics, or science; at least 3 units must be 100% engineering topic; may include only 1 unit of CIV_ENV 399-0 Projects; no 399 course from another department is accepted; no course may be taken P/N.

3 0.34 units may count toward unrestricted electives.