ENVIRONMENTAL ENGINEERING, MINOR

Environmental engineers play particularly pivotal roles as professionals who bridge the gap between understanding complex scientific concepts and helping to formulate public policies that affect the environment. Environmental engineering has become an important aspect of engineering practice in most engineering fields, and the discipline spans the professional spectrum from the private sector through governmental agencies to academia. An undergraduate minor in environmental engineering allows engineering students to pursue an interest in this field and to incorporate aspects of environmental engineering into careers in other engineering disciplines.

Students in any undergraduate major in the Whiting School of Engineering are eligible for admission to the environmental engineering minor program. Students will work with an advisor in the Department of Environmental Health and Engineering to develop a program that meets the requirements for the minor and is consistent with the educational requirements of their major field of engineering study.

For further information, contact the Director of Undergraduate Studies in Environmental Engineering or the Academic Program Administrator.

The information below describes the academic requirements for students entering JHU as degree-seeking students in Fall 2025. Students who entered JHU as degree-seeking students prior to Fall 2025 should view the appropriate archived catalogue ***(***https://e-catalogue.jhu.edu/archive/***).***

The minor in Environmental Engineering requires 6 courses and at least 20 credits, aside from the required Mathematics and Basic Sciences courses. Grades of C- or higher are required for all courses. No Satisfactory/Unsatisfactory (S/U) grade will be accepted.

MINOR REQUIREMENTS

MATHEMATICS

Code	Title	Credits
AS.110.108	Calculus I (Physical Sciences & Engineering)	4
AS.110.109	Calculus II (For Physical Sciences and Engineering)	4
AS.110.202	Calculus III	4
or AS.110.211	Honors Multivariable Calculus	
EN.553.291	Linear Algebra and Differential Equations	4
or AS.110.302	Differential Equations and Applications	
Total Credits		**16**

BASIC SCIENCES

Code	Title	Credits
AS.030.101	Introductory Chemistry I	3
AS.030.102	Introductory Chemistry II [1]	3
AS.030.105	Introductory Chemistry Laboratory I	1
AS.030.106	Introductory Chemistry Laboratory II [1]	1
AS.171.101	General Physics: Physical Science Major I	4
or AS.171.107	General Physics for Physical Sciences Majors (AL)	
AS.173.111	General Physics Laboratory I	1
Total Credits		**13**

[1] Students who have exam credits for Chemistry I and the lab must take AS.030.103 Applied Chemical Equilibrium and Reactivity w/lab rather than AS.030.102 Introductory Chemistry II and AS.030.106 Introductory Chemistry Laboratory II.

REQUIRED COURSES

Code	Title	Credits
EN.570.303	Environmental Engineering Principles and Applications	3
EN.570.304	Environmental Engineering Laboratory	4
EN.570.305	Environmental Health and Engineering Systems Design	4
Total Credits		*11*

ELECTIVE COURSES

Code	Title	Credits
One course from Group A		3
One course from Group B		3-4
One course from Group A or B		3-4
Total Credits		*9-11*

ELECTIVE COURSE LISTINGS

Group A

Code	Title	Credits
AS.020.151	General Biology I	3
AS.270.220	The Dynamic Earth: An Introduction to Geology	3
EN.570.108	Introduction to Environmental Engineering and Design	3
EN.570.201	Environmental Biology and Ecology	3
EN.570.239	Environmental Engineering Chemistry - Current and Emerging Topics	3
EN.570.350	Environmental Hazards and Health Risks	3

Group B

Code	Title	Credits
AS.030.205	Introductory Organic Chemistry I	4
AS.030.301	Physical Chemistry I	3
EN.540.301	Kinetic Processes	4
EN.540.303	Transport Phenomena I	3
EN.570.353	Hydrology	3
EN.570.411	Engineering Microbiology	3
EN.570.442	Environmental and Analytical Organic Chemistry	3
EN.570.443	Aquatic and Biofluid Chemistry	3
EN.570.445	Physical and Chemical Processes I	3
EN.570.490	Solid Waste Engineering and Management	3
EN.570.491	Hazardous Waste Engineering and Management	3