

Courses for Environmental Engineering Certificate

The Environmental Engineering undergraduate certificate involves a total of 12 credit hours (200-level or greater). To complete the certificate, student must take the foundation course (CE 351 Introduction to Environmental Engineering), one biology course, one chemistry course, and one course from a focus area. Course substitutions will be considered on a case-by-case basis and must be approved by the Certificate Director.

Foundation Course (3 credit):

CE 351 Introduction to Environmental Engineering (Spring, Fall, Summer)

Biology Course (Choose one course, 3 credit):

BIO 308 or 208 Principles of Microbiology (Spring, Fall, Summer)

CE 555 Microbial Aspects of Environmental Engineering (Fall)

PLS 566 Soil Microbiology (Spring)

Chemistry (Choose one course, 3 credit):

CHE 226 Analytical Chemistry (Spring, Fall)

CHE 230 Organic Chemistry I (Spring, Summer, Fall)

CHE 236 Survey of Organic Chemistry (Spring, Fall)

CHE 565 Environmental Chemistry

Focus Areas (Choose one course, 3 credit):

<i>Natural Water Systems</i>	BAE 532/CE 542 Introduction to Stream Restoration BAE 535/MNG 564 Environmental Control Systems Design and Reclamation CE 547/BAE 547 Watershed Sedimentation
<i>Water and Wastewater Treatment</i>	BAE 435G Waste Management for Biosystems CE 551 Water and Wastewater Treatment Engineering CME 580 Design of Rate and Equilibrium Processes for Water Pollution CME 599 Topics in Chemical Engineering CME 395 Independent Research Course (Environmental related) CME 599 Membrane Science and Technology
<i>Stormwater</i>	BAE 599 Topics in Biosystems Engineering – Low Impact Development (New course application forthcoming)
<i>Air</i>	MNG 341 Mine Ventilation MNG 541 Computerized Design of Mine Ventilation Systems
<i>Energy</i>	CE 553 Environmental Consequences of Energy Production CME 523 Concepts, Assessment Tools and Methods in Sustainable Power and Energy CME 542 Power Generation Technologies
<i>Environmental Health and Remediation</i>	CE 599 Subsurface Remediation Engineering (New course application forthcoming)
<i>Health and Safety</i>	MNG 322 Mine Safety and Health Management Processes (Note: 2 credit course, additional course credit must be satisfied)
<i>Chemistry</i>	CHE 565 Environmental Chemistry
<i>Biology</i>	CE 555 Microbial Aspects of Environmental Engineering
<i>Regulations</i>	AEC 445G Introduction to Resource/Environmental Economics
<i>Misc.</i>	prefix-395 Independent Research (e.g. Study) Courses, must be approved by Director prefix-599 Special Topics Engineering Courses, must be approved by Director

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