

North Carolina State University  
**ENVIRONMENTAL ENGINEERING CURRICULUM**  
Degree Earned: B.S. in Environmental Engineering (14ENEBS)  
Department of Civil, Construction, and Environmental Engineering  
For students entering NCSU **before** July 2023 (Fall 23)  
(CP) Critical Path major specific course predictive of student success

FRESHMAN YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
CH 101 Chemistry - A Molecular Science <sup>1</sup>	3	CH 201 Chemistry – A Quantitative Science	3
CH 102 General Chemistry Laboratory <sup>1</sup>	1	EC 205 Fundamentals of Economics (GEP Req)	3
E 101 Introduction to Engr & Prob. Solving <sup>1,2</sup>	1	MA 241 Calculus II <sup>1</sup>	4
E 115 Intro to Computing Environments <sup>1,2</sup>	1	PY 205 Physics for Engineers & Scientists I <sup>1</sup>	3
ENG 101 Academic Writing and Research <sup>1,2</sup>	4	PY 206 Physics for Engineers & Scientists I Lab <sup>1</sup>	1
MA 141 Calculus I <sup>1,2</sup>	4	E 102 Engineering in the 21 <sup>st</sup> Century (GEP Req)	2
HESF 1XX Fitness & Wellness Course	1		
<i>Total:</i>	15	<i>Total:</i>	16
SOPHOMORE YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
CE 214 Engineering Mechanics – Statics <sup>2</sup>	3 (CP) <sup>3</sup>	BIO 183 Intro. Biology: Cellular and Molecular Bio.	4
CE 250 Introduction to Sustainable Infrastructure <sup>2</sup>	3 (CP) <sup>3</sup>	CE 373 Fundamentals of Environmental Eng	3 (CP) <sup>3</sup>
CHE 205 Chemical Proc Principles	4	Earth Systems Chemistry Elective <sup>4</sup>	3
MA 242 Calculus III	4	MA 341 Applied Differential Equations I	3
CSC 111 Intro to Computing: PYTHON	3	CE 282 Hydraulics <sup>2</sup>	3 (CP) <sup>3</sup>
		HES XXX Phys Ed/Healthy Living Course	1
<i>Total:</i>	17	<i>Total:</i>	17
JUNIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
CE 378 Environmental Chemistry & Microbiology	4	CE 381 Hydraulics Sys Meas Lab	1
TDE 220 Civil Engineering Graphics <b>OR</b>	3	CE 383 Hydrology & Urban Water Sys	3
GIS 280 Intro to Geographic Info Systems		CE 339 Civil Engineering Systems	3
PY 208 Physics for Engineers & Scientists II	3	MAE 201 Engr Thermodynamics I	3
PY 209 Physics for Engineers & Scientists II Lab	1	PS 320 US Environ Law and Politics <b>OR</b>	3
ST 370 Probability & Statistics for Engr	3	PS 336 Global Envir Pol (GEP Req)	
COM 110 Public Speaking (GEP Req)	3	GEP Requirement ( <i>GEP Humanities</i> ) <sup>5</sup>	3
<i>Total:</i>	17	<i>Total:</i>	16
SENIOR YEAR			
FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
CE 488 Water Resource Engineering	3	CE 477 Solid Waste Engineering	3
CE 476 Air Pollution Control <b>OR</b>	3	CE 481 Environmental Engineering Project	3
CE 479 Air Quality		ENE Elective II <sup>6</sup>	3
ENE Elective I <sup>6</sup>	3	ENE Elective III <sup>6</sup>	3
CE 484 Water Supply & Waste Water Sys	3	GEP Requirement ( <i>GEP Interdisciplinary Persp.</i> ) <sup>5</sup>	3
GEP Requirement ( <i>GEP Humanities</i> ) <sup>5</sup>	3		
<i>Total:</i>	15	<i>Total:</i>	15
Minimum Credit Hours Required for Graduation: 128			

**Major/Program Footnotes:**

<sup>1</sup> Courses required for Change of Degree Audit (CODA). CH 101, 102; MA 141, 241; PY 205, 206 must be completed with C or higher.

<sup>2</sup> Minimum grade of C-, E 115 requires satisfactory completion (S).

<sup>3</sup> CP = Critical Path major specific course predictive of student success.

<sup>4</sup> Select from MEA 323 or SSC 442.

<sup>5</sup> GEP Requirements to be selected from the appropriate lists in consultation with advisor. See Footnote below.

<sup>6</sup> ENE Elective – three electives in senior year:

- I. Select one: CE 435, CE 476, CE 478, CE 487, CE 479, or advised elective from CE course list.
- II. Select another one course from I., or CE 499.
- III. Select another one course from option I or one course from the [Environmental General Elective approved list](#).

North Carolina State University  
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Course Listing with Pre- and Corequisites  
Department of Civil, Construction, and Environmental Engineering  
For students entering NCSU Department **before** July 2023 (Fall 23)

**FRESHMAN YEAR**

FALL SEMESTER	SPRING SEMESTER
CH 101 (CoReq CH 102) CH 102 (CoReq CH 101) E 101 E 115 ENG 101 MA 141 HESF 1XX Fitness & Wellness Course	CH 201 (C- or better in CH 101) EC 205 Economics (GEP Soc. Sci. Req.) MA 241 (C or better in MA 141) PY 205 (C or better in MA 141) PY 206 (C or better in MA 141; CoReq PY 205) E 102 (CoReq E 115 and MA 141) (GEP Int. Disc. Persp. Req.)

**CODA Requirements:** <sup>1</sup>C or better in CH 101, CH 102, ENG 101, MA 141, PY 205, and PY 206 <sup>2</sup> Completion of E 115

**SOPHOMORE YEAR**

FALL SEMESTER	SPRING SEMESTER
CE 214 (C or better in PY 205 and MA 241; CoReq MA 242) CE 250 (CoReq CSC 111 and CE 214) CHE 205 (C or better in MA 241, PY 205 and [CH 201 or CH 221 or CH 225]) MA 242 (C or better in MA 241) CSC 111 (CoReq E 115 and MA 141)	BIO 183 (CH 101 or BIO 181) CE 373 (CoReq CE 250 and [CHE 205 or CE 282]) Earth Systems Chemistry Elective <sup>1</sup> MA 341 (MA 242) CE 282 (C- or better in CE 214, CoReq ST 370) HES *** Phys. Ed/Healthy Living Course

**JUNIOR YEAR**

FALL SEMESTER	SPRING SEMESTER
CE 378 (MEA 323 or SSC 442; C- or better in CE 250 and CE 737; CoReq ST 370) TDE 220 <b>OR</b> GIS 280 PY 208 (C- or better in PY 205 and MA 241) PY 209 (CoReq PY 208) ST 370 (MA 241) COM 110 Public Speaking (GEP Additional Breadth Req.)	CE 381 (CoReq CE 282) CE 383 (C- or better in CE 282; CoReq ST 370) CE 339 (CSC 111 and [MA 341 or MA 305]; Junior standing) MAE 201 (MA 242 and [PY 208 or PY 202]) PS 320 <b>OR</b> PS 336 Global Envir Pol (GEP Soc. Sci. Req.) GEP Requirement (GEP Humanities Req.) <sup>2</sup>

**SENIOR YEAR**

FALL SEMESTER	SPRING SEMESTER
CE 488 (CE 339 and CE 383) CE 476 (MAE 201 and CE 373; CoReq ST 370) <b>OR</b> CE 479 (CE 282 and CE 373; CoReq ST 370) ENE Elective I <sup>3</sup> CE 484 (CE 282 and CE 373) GEP Requirement (GEP Humanities Req.) <sup>2</sup>	CE 477 (CE 250, CE 282, and CE 373) CE 481 (CE 378, CE 383; CoReq CE 484, +2 of CE 476, CE 477, CE 479, and CE 488) ENE Elective II <sup>3</sup> ENE Elective III <sup>3</sup> GEP Requirement (GEP Int. Disc. Persp. Req.) <sup>2</sup>

**Footnotes:**

<sup>1</sup> Select from MEA 323 or SSC 442.

<sup>2</sup> GEP Requirements to be selected from the appropriate lists in consultation with the advisor.

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E 101 Introduction to Engr & Prob. Solving <sup>1,2</sup>	1	MA 241 Calculus II <sup>1</sup>	4
E 115 Intro to Computing Environments <sup>1,2</sup>	1	PY 205 Physics for Engineers & Scientists I <sup>1</sup>	3
ENG 101 Academic Writing and Research <sup>1,2</sup>	4	PY 206 Physics for Engineers & Scientists I Lab <sup>1</sup>	1
MA 141 Calculus I <sup>1,2</sup>	4	E 102 Engineering in the 21 <sup>st</sup> Century (GEP Req)	2
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<i>Total:</i>	15	<i>Total:</i>	16
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CHE 205 Chemical Proc Principles	4	Earth Systems Chemistry Elective <sup>4</sup>	3
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PY 208 Physics for Engineers & Scientists II	3	CE 339 Civil Engineering Systems	3
PY 209 Physics for Engineers & Scientists II Lab	1	MAE 201 Engr Thermodynamics I	3
ST 370 Probability & Statistics for Engr	3	PS 320 US Environ Law and Politics <b>OR</b> PS 336 Global Envir Pol (GEP Req)	3
COM 110 Public Speaking (GEP Req)	3	GEP Requirement ( <i>GEP Humanities</i> ) <sup>5,6</sup>	3
<i>Total:</i>	17	<i>Total:</i>	16
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CE 488 Water Resource Engineering	3	CE 477 Solid Waste Engineering	3
CE 476 Air Pollution Control <b>OR</b> CE 479 Air Quality	3	CE 481 Environmental Engineering Project	3
ENE Elective I <sup>7</sup>	3	ENE Elective II <sup>7</sup>	3
CE 484 Water Supply & Waste Water Sys	3	ENE Elective III <sup>7</sup>	3
GEP Requirement ( <i>GEP USDEI</i> ) <sup>6</sup>	3	GEP Requirement ( <i>GEP Interdisciplinary Persp.</i> ) <sup>6</sup>	3
<i>Total:</i>	15	<i>Total:</i>	15
Minimum Credit Hours Required for Graduation: 128			

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<sup>3</sup> CP = Critical Path major specific course predictive of student success.

<sup>4</sup> Select from MEA 323 or SSC 442.

<sup>5</sup> Course must be from any category except Visual and Performing Arts.

<sup>6</sup> GEP Requirements to be selected from the appropriate lists in consultation with advisor. See Footnote below.

<sup>7</sup> ENE Elective – three electives in senior year:

IV. Select one: CE 435, CE 476, CE 478, CE 487, CE 479, or advised elective from CE course list.

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**CODA Requirements:** <sup>1</sup>C or better in CH 101, CH 102, ENG 101, MA 141, PY 205, and PY 206 <sup>2</sup> Completion of E 115

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FALL SEMESTER	SPRING SEMESTER
CE 488 (CE 339 and CE 383) CE 476 (MAE 201 and CE 373; CoReq ST 370) <b>OR</b> CE 479 (CE 282 and CE 373; CoReq ST 370) ENE Elective I <sup>4</sup> CE 484 (CE 282 and CE 373) GEP Requirement (GEP USDEI Req.) <sup>2</sup>	CE 477 (CE 250, CE 282, and CE 373) CE 481 (CE 378, CE 383; CoReq CE 484, +2 of CE 476, CE 477, CE 479, and CE 488) ENE Elective II <sup>4</sup> ENE Elective III <sup>4</sup> GEP Requirement (GEP Int. Disc. Persp. Req.) <sup>2</sup>

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