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 Science1  CH 102 General Chemistry Laboratory1  E 101 Introduction to Engr & Prob. Solving1,2  E 115 Intro to Computing Environments1,2  ENG 101 Academic Writing and Research1,2  MA 141 Calculus I1,2  HESF 1XX Fitness & Wellness Course | 3  1  1  1  4  4  1 | CH 201 Chemistry – A Quantitative Science  EC 205 Fundamentals of Economics (GEP Req)  MA 241 Calculus II1  PY 205 Physics for Engineers & Scientists I1  PY 206 Physics for Engineers & Scientists I Lab1  E 102 Engineering in the 21st Century (GEP Req) | 3  3  4  3  1  2 |
| *Total:* | 15 | *Total:* | 16 |
| **SOPHOMORE YEAR** | | | |
| FALL SEMESTER | CREDITS | SPRING SEMESTER | CREDITS |
| CE 214 Engineering Mechanics – Statics2  CE 250 Introduction to Sustainable Infrastructure2  CHE 205 Chemical Proc Principles  MA 242 Calculus III  CSC 111 Intro to Computing: PYTHON | 3 (CP)3  3 (CP)3  4  4  3 | BIO 183 Intro. Biology: Cellular and Molecular Bio.  CE 373 Fundamentals of Environmental Eng  Earth Systems Chemistry Elective4  MA 341 Applied Differential Equations I  CE 282 Hydraulics2  HES XXX Phys Ed/Healthy Living Course | 4  3 (CP)3  3  3  3 (CP)3  1 |
| *Total:* | 17 | *Total:* | 17 |
| **JUNIOR YEAR** | | | |
| FALL SEMESTER | CREDITS | SPRING SEMESTER | CREDITS |
| CE 378 Environmental Chemistry & Microbiology  TDE 220 Civil Engineering Graphics **OR**  GIS 280 Intro to Geographic Info Systems  PY 208 Physics for Engineers & Scientists II  PY 209 Physics for Engineers & Scientists II Lab  ST 370 Probability & Statistics for Engr  COM 110 Public Speaking (GEP Req) | 4  3  3  1  3  3 | CE 381 Hydraulics Sys Meas Lab  CE 383 Hydrology & Urban Water Sys  CE 339 Civil Engineering Systems  MAE 201 Engr Thermodynamics I  PS 320 US Environ Law and Politics **OR**  PS 336 Global Envir Pol (GEP Req)  GEP Requirement (*GEP Humanities*)5 | 1  3  3  3  3  3 |
| *Total:* | 17 | *Total:* | 16 |
| **SENIOR YEAR** | | | |
| FALL SEMESTER | CREDITS | SPRING SEMESTER | CREDITS |
| CE 488 Water Resource Engineering  CE 476 Air Pollution Control **OR**  CE 479 Air Quality  ENE Elective I6  CE 484 Water Supply & Waste Water Sys  GEP Requirement (*GEP Humanities*)5 | 3  3  3  3  3 | CE 477 Solid Waste Engineering  CE 481 Environmental Engineering Project  ENE Elective II6  ENE Elective III6  GEP Requirement (*GEP Interdisciplinary Persp*.)5 | 3  3  3  3  3 |
| *Total:* | 15 | *Total:* | 15 |
| Minimum Credit Hours Required for Graduation: 128 | | | |

**Major/Program Footnotes:**

1 Courses required for Change of Degree Audit (CODA). CH 101, 102; MA 141, 241; PY 205, 206 must be completed with C or higher.  
2 Minimum grade of C-, E 115 requires satisfactory completion (S).

3 CP = Critical Path major specific course predictive of student success.

4 Select from MEA 323 or SSC 442. 5 GEP Requirements to be selected from the appropriate lists in consultation with advisor. See Footnote below.

6ENE Elective – three electives in senior year:

1. Select one: CE 435, CE 476, CE 478, CE 487, CE 479, or advised elective from CE course list.
2. Select another one course from I., or CE 499.
3. Select another one course from option I or one course from the [Environmental General Elective approved list](https://docs.google.com/document/d/1TVLASG-xRMh-c4gnMebVqpC1gXp66BjAexQKFfhFBoE/edit?usp=sharing).

North Carolina State University

**ENVIRONMENTAL ENGINEERING CURRICULUM**

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**: 1C or better in CH 101, CH 102, ENG 101, MA 141, PY 205, and PY 206 2 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 Elective1  MA 341 (MA 242)  CE 282 (C- or better in CE 214, CoReq: MA 341, MA 305 or 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 373; CoReq ST 370)  TDE 220 **OR** 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 **OR** PS 336 Global Envir Pol (GEP Soc. Sci. Req.)  GEP Requirement (GEP Humanities Req.)2 |
|  | |
| **SENIOR YEAR** | |
| **FALL SEMESTER** | **SPRING SEMESTER** |
| CE 488 (CE 339 and CE 383)  CE 476 (MAE 201 and CE 373; CoReq ST 370) **OR** CE 479 (CE 282 and CE 373; CoReq ST 370)  ENE Elective I3  CE 484 (CE 282 and CE 373)  GEP Requirement (GEP Humanities Req.)2 | 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 II3  ENE Elective III3  GEP Requirement (GEP Int. Disc. Persp. Req.)2 |

**Footnotes:**

1 Select from MEA 323 or SSC 442.

2 GEP Requirements to be selected from the appropriate lists in consultation with the advisor.

3ENE Elective – three electives in senior year:

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