

**North Carolina State University**  
**ENVIRONMENTAL ENGINEERING CURRICULUM**

**Degree Earned: B.S. in Environmental Engineering; Department of Civil, Construction, and Environmental Engineering**

For Students entering after July 2012 (Sum2'12)

FRESHMAN YEAR

<u>Fall Semester</u>		<u>Credits</u>	<u>Spring Semester</u>		<u>Credits</u>
CH 101	Chemistry – A Molecular Science	3	CH 201	Chemistry – A Quantitative Science	3
CH 102	General Chemistry Laboratory	1	EC 205	Economics (GEP Soc Sci Req) <sup>1</sup>	3
E 101	Intro. to Engineering & Problem Solving	1	MA 241	Calculus II	4
E 115	Intro. to Computing Environments	1	PY 205	Physics for Engrs. and Sci. I	3
ENG 101	Academic Writing & Research	4	PY 206	Physics for Engrs and Sci. I Lab	1
MA 141	Calculus I	4	HES_XXX	Phys. Ed/Healthy Living Course <sup>1</sup>	<u>1</u>
HESF 1XX	Fitness & Wellness Course	<u>1</u>			15
		15			

SOPHOMORE YEAR

<u>Fall Semester</u>		<u>Credits</u>	<u>Spring Semester</u>		<u>Credits</u>
CE 214	Engineering Mechanics-Statics	3	BIO 183	Introduction Biology II	4
CE 373	Fundamentals of Environmental Engr.	3	CE 313	Mechanics of Solids	3
CHE 205	Chemical Process Principles	4	MEA 323	Earth System Chemistry	3
MA 242	Calculus III	4	CSC 111	Intro. to Computing: Python	3
COM 110	(Preferred) Public Speaking (GEP AB Req <sup>1</sup> )	4	MA 341	App. Differential Equations I	<u>3</u>
GC 120	<u>or</u> Graphics Communication (alt GEP AB <sup>2</sup> )	<u>3</u>			16
		17			

JUNIOR YEAR

<u>Fall Semester</u>		<u>Credits</u>	<u>Spring Semester</u>		<u>Credits</u>
CE 378	Environmental Chemistry & Microbiology	4	CE 383	Hydrology & Urban Water Sys.	3
CE 390	Engineering Economics	1	CE 381	Hydraulics Sys. Meas. Lab.	1
Graphics / Communication Elective <sup>2</sup>		3	CE 342	Engr. Behavior of Soils & Foundations	4
CE 382	Hydraulics	3	CE 339	Civil Engineering Systems	3
PY 208	Physics for Engrs. & Sci. II	3	MAE 301	Engineering Thermodynamics I	3
PY 209	Physics for Engrs. & Sci. II Lab	1	PS 320	U.S. Env. Law & Politics <u>or</u>	
ST 370	Probability and Statistics for Engineers	<u>3</u>	PS 336	Global Env. Politics (GEP Soc Sci Req <sup>1</sup> )	<u>3</u>
		18			17

SENIOR YEAR

<u>Fall Semester</u>		<u>Credits</u>	<u>Spring Semester</u>		<u>Credits</u>
CE 488	Water Resources Engineering	3	CE 477	Solid Waste Engineering	3
CE 476 (F)	Air Pollution Control <u>or</u>		CE 481	Environmental Engineering Project	3
CE 479 (S)	Air Quality	3	Environmental Engineering Elective <sup>3</sup>		3
CE 484	Water Supply & Waste Water Systems	3	GEP Requirement <sup>1</sup>		3
GEP Requirement <sup>1</sup>		3	GEP Requirement <sup>1</sup>		<u>2</u>
GEP Requirement <sup>1</sup>		<u>3</u>			14
		15			

**Minimum Hours Required for Graduation = 127**

<sup>1</sup> GEP REQUIREMENTS to be selected from the applicable GEP list in consultation with advisor

<sup>2</sup> Graphics/Communications: GIS 410 or TDE 220 (when Additional Breadth (AB) is GC 120, take ENG 331 or COM 110)

<sup>3</sup> Environmental Engineering Electives: CE 479 (S), CE 476 (F), CE 487 (S), CE 435 (F), CE 497(F)

Foreign Language proficiency at the FL\_102 level required for graduation

# ENVIRONMENTAL ENGINEERING CURRICULUM

## COURSE LISTING WITH PRE- AND COREQUISITES IN PARENTHESES

For Students entering after July 2012 (Sum2 '12)

### Fall Semester

### Spring Semester

#### FRESHMAN YEAR

CH 101 CH 102 (CoReq. CH 101) E 101 E 115 ENG 101 MA 141 HESF 1XX*	CH 201 (C- or better in CH 101) EC 205 (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; Co: PY 205) HES__ XXX Phys. Ed/Healthy Living Elective*
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<b>Matriculation Requirements (CODA):</b>	1. C or better in: CH 101, CH 102, E 101, ENG 101, MA 141, MA 241, PY 205 & PY 206
<i>(admission is competitive)</i>	2. Completion of E 115

#### SOPHOMORE YEAR

CE 214 (C or better in PY 205 & MA 241, CoReq MA 242) CE 373 (CoReq CHE 205 or CE 382) CHE 205 (C or better in MA 241 & PY 205, and CH 201 or CH 221) MA 242 (C or better in MA 241) COM 110 ( <i>Preferred</i> ) Public Speaking (GEP AB Requirement) <b>or</b> <i>GC 120 (alt GEP AB; requires ENG 331 or COM 110 as Communication elective)</i>	BIO 183 (CH 101 or BIO 181) CE 313 (MA 242, C- or better in CE 214) MEA 323 (CH 201 and CE 373 or any MEA course) CSC 111 (CoReq E 115 and MA 141) MA 341 (MA 242)
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#### JUNIOR YEAR

CE 378 (MEA 323, C- or better in CE 373, CoReq ST 370) CE 390 (CSC 111, MA 341 or MA 305 or ST 370) GIS 410 <b>or</b> TDE 220 ( <i>unless AB is GC 120, then take ENG 331 or COM 110</i> ) CE 382 (CE 214, CoReq MA 341 or MA 305 or ST 370) PY 208 (C- or better in PY 205 and in MA 241) PY 209 (C- or better in PY 205, MA 241, PY 206, CoReq PY 208) ST 370 (MA 141)	CE 383 (C- or better in CE 382) CE 381 (CoReq 382) CE 342 (C- or better in CE 313, CoReq 382) CE 339 (CSC 112, MA 341 or MA 305) MAE 301 (MA 242, PY 208 or PY 202) PS 320 GEP Soci Sci Req* <b>or</b> PS 336 GEP Soci Sci Req*
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#### SENIOR YEAR

CE 488 (CE 339, CE 383) CE 476 (MAE 301, CE 373, CE 390 and ST 370) <b>or</b> CE 479 (CE 373, CE 382, CoReq ST 370) CE 484 (CE 373, CE 382) GEP Requirement* GEP Requirement*	CE 477 (CE 373, CE 382, CoReq CE 342 and CE 390) CE 481 (CE 378, 383, Co: 484 & 390 +2 of 476, 477, 479, 488) Environmental Engineering Elective <sup>1</sup> GEP Requirement* GEP Requirement*
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<sup>1</sup>Refer to the lists of elective courses for prerequisite and corequisite requirements (list of electives on front)

\*GEP REQUIREMENTS to be selected from the approved list in consultation with advisor