

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) ¹	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	E 102	Engineering in 21 st Century (GEP IP Req) ¹	<u>2</u>
HESF 1XX	Fitness & Wellness Course	<u>1</u>			16
		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 ¹)	3	MA 341	App. Differential Equations I	3
GC 120	<u>or</u> Graphics Communication (alt GEP AB ²)	<u>3</u>	HES XXX	Phys Ed/Healthy Living Course	<u>1</u>
		17			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 ²		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 201	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 ¹)	<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>	3	CE 481 (S)	Environmental Engineering Project	3
CE 479 (S)	Air Quality		Environmental Engineering Elective ³		3
CE 484	Water Supply & Waste Water Systems	3	GEP Requirement ¹		3
GEP Requirement ¹		3			<u>2</u>
GEP Requirement ¹		<u>3</u>			12
		15			

Minimum Hours Required for Graduation = 127

¹GEP REQUIREMENTS to be selected from the applicable GEP list in consultation with advisor

²Graphics/Communications: TDE 220 (preferred) or GIS 280 (when Additional Breadth (AB) is GC 120, take ENG 331 or COM 110)

³Environmental Engineering Electives: CE 479 (S), CE 476 (F), CE 487 (S), CE 435 (F), CE 478(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) E 102
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Matriculation Requirements (CODA):	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) or <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) HES__XXX Phys. Ed/Healthy Living Elective*
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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) TDE 220 or GIS 280 (<i>unless AB is GC 120, then take ENG 331 or COM 110</i>) CE 382 (C- or better in 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 PY208) 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 111, MA 341 or MA 305) MAE 201 (MA 242, PY 208 or PY 202) PS 320 GEP Soci Sci Req* or 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) or 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 ¹ GEP Requirement*
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¹Refer 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