ENVIRONMENTAL ENGINEERING (EVEN) B.S. DEGREE Curriculum

2016-2017 Academic Year

Fall, First Year		Spring, First Year	
APPM 1350 Calculus 1 for Engineers	4	APPM 1360 Calculus 2 for Engineers	4
CHEN 1211 General Chemistry for Engineers	4	CHEN 1310 Intro to Engineering Computing	3
CHEM 1221 General Chemistry Laboratory	1	PHYS 1110 General Physics 1	4
EVEN 1000 Introduction to Environmental Engineering (*)	1	Technical Elective I [2]	3
GEEN 1400 Engineering Projects	3	H&SS Elective II [3]	3
H&SS Elective I [3]	3		
	16		**17**

Fall, Second Year		Spring, Second Year	
APPM 2350 Calculus 3 for Engineers	4	APPM 2360 Intro Differential Eqns with Linear Algebra	4
PHYS 1120 General Physics 2	4	CVEN 4834 Sustainability Principles for Engineers (*)	3
PHYS 1140 Experimental Physics 1	1	CHEN 2120 Material and Energy Balances	3
Solid Mechanics [4]	3	CVEN 3414 Fundamentals of Environmental Engineering	3
H&SS Elective III [3]	3	H&SS Elective IV [3]	3
	15		**16**

Fall, Third Year		Spring, Third Year	
EVEN 4404 Water Chemistry (*)	3	EVEN 4484 Introduction to Environmental Microbiology (*)	3
EVEN 4414 Water Chemistry Lab (*)	1	EVEN 4424 Environmental Organic Chemistry (*)	3
Fluid Mechanics [5]	3	Heat Transfer [6]	3
Thermodynamics [7]	3	Probability and Statistics [8]	3
Engineering Economics[13]	3	Environmental Engineering TE Sequence I [9]	3
Required Writing Course [10]	3		
	16		**15**

Fall, Fourth Year		Spring, Fourth Year	
EVEN 4464 Environmental Engineering Processes (*)	3	CVEN 4333 Engineering Hydrology (*)	3
H&SS Elective V [3]	3	MCEN 4131 Air Pollution Control (*)	3
Free Elective	2	EVEN 4434 Environmental Engineering Design (*)	4
Environmental Engineering TE Sequence II [9]	3	Environmental Engineering TE Sequence III[9] or	
Air or Earth Science Laboratory/Field	3	Technical Elective II [2]	3
Technical Elective II [2]/Senior Thesis[11] or Option III	3	Technical Elective III [2]/Senior Thesis [12]	3
	17		**16**

* Only offered in the semester shown (not including summer offerings). **Total Credit Hours 128**

[2]A total of 9 credit hours of technical electives is required, from engineering, mathematics or sciences. Three TE credits may be lower division (1000-, 2000-level); remaining TE credits must be upper division (3000+). Three TE credits must be in the earth sciences, either lower or upper division. An independent study or senior thesis may be completed as technical electives for up to 6 credits.

[3]A total of 15 credit hours of humanities and social sciences (H&SS) electives is required. At least six hours must be at the upper division level.

[4] Solid Mechanics options: CVEN 2121 Analytical Mechanics (F,S), GEEN 2851 Statics for Engineers, or MCEN 2023 Statics and Structures (F)

[5] Fluid Mechanics options: CHEN 3200 Chemical Engineering Fluid Mechanics (S, required for Chemical Processing Option), CVEN 3313 Theoretical Fluid Mechanics (S), GEEN 3853 Fluid Mechanics for Engineers (Sum), or MCEN 3021 Fluid Mechanics (F,S)

[6] Heat Transfer options: CHEN 3210 Chemical Engineering Heat Transfer (F) or MCEN 3022 Heat Transfer (F,S)

[7] Thermodynamics options: AREN 2110 Thermodynamics (F,S), CHEN 3320 Chemical Engineering Thermodynamics (F; required for Chemical Processing Option), GEEN 3852 Thermodynamics for Engineers (Sum), or MCEN 3012 Thermodynamics (F, S, required for Air Quality Option)

[8] Probability and Statistics options: APPM 4570 Statistical Methods (F,S), CHEN 3010 Applied Data Analysis (F), CVEN 3227 Probability, Statistics, and Decision (S)

[9] Environmental Engineering TE courses are specified on the following pages.

[10] Writing: HUEN 1010 Intro to the Humanities Freshman only (F,S), HUEN 3100 Humanities for Engineers 1 (F,S), PHYS 3050 Writing in Physics: Problem Solving & Rhetoric (F), WRTG 3030 Writing on Science and Society (F,S,Sum), or WRTG 3035 Technical Communication and Design (F, S).

[11] Senior Thesis: a senior thesis can be completed on a single research topic, with faculty approval and direction, and can apply toward technical elective requirements.

[13] Engineering Economics options: CVEN 4147 Civil Engineering Systems (F), EMEN 4100 Business Methods and Economics for Engineers