

SEM	CR	EVEN B.S. Degree: Block Diagram 2017-18					
Spr	16	Enviro Eng TE II -3- or Technical Elective II -3- *	MCEN 4131 -3- Air Pollution Control P: fluid mechanics & Thermo #	CVEN 4333 -3- Engineering Hydrology P: Fluids C: Prob & Stat	EVEN 4434 -4- Environmental Engineering Design P: CVEN 3414 #	Technical Elective III -3- or Senior thesis *	
Fall	17	Enviro Eng TE I -3-	Air or Earth Science Lab or Field course -3-	Free Elective -2-	EVEN 4464 -3- Env Engrg Processes P: CVEN3414 & fluids #	Technical Elective II -3- or Enviro Eng TE II -3- or Senior thesis *	H&SS Elective V -3- upper division
Spr	15	Enviro Eng Design TE -3-	EVEN 4424 -3- Env Organic Chemistry P:CHEN1211 #	Probability & Statistics -3- <u>CHEN</u> :P :CHEN 1310 & APPM 2360	EVEN 4484 -3- Intro to Environ Microbiology P:CHEN1211 #	Heat Transfer -3- <u>MCEN</u> :P: Thermo/fluids/DiffiQ <u>CHEN</u> : P: fluids	
Fall	16	Engineering Economics -3-	EVEN 4404 -3- Water Chemistry EVEN 4414 -1- Water Chem Lab P: CHEN1211 & CVEN3414 #	EVEN 3550 -3- Sustainability Principles for Engineers C: CVEN 3414 #		Thermodynamics -3- <u>MCEN</u> : P:Calc 3 <u>AREN</u> : P:PHYS 1110 C: Calc 2	Writing Course -3- (Jr. standing)
Spr	16	APPM 2360 -4- Introduction to Differential Equations & Linear Algebra P: APPM 1360 or MATH 2300		Fluid Mechanics -3- CVEN P: solids MCEN P: solids C: APPM 2360	CVEN 3414 -3- Fundamentals of Env. Engineering P: CHEN 1211, CHEM 1221, & APPM 1360	CHEN 2120 -3- Material and Energy Balances P: CHEM1211, CHEN 1310 **	H&SS Elective IV -3- upper division
Fall	15	APPM 2350 -4- Calculus III for Engineers P: APPM 1360 or MATH 2300	PHYS 1120 -4- PHYS 1140 -1- Gen.Phys/Lab P: PHYS 1110 & C: MATH 2300 or APPM 1360	Solid Mechanics course -3- <u>CVEN</u> :P: PHYS 1110 & C: Calc III; <u>MCEN</u> : P: calc II			H&SS Elective III -3- lower division
Spr	17	APPM 1360 -4- Calculus II for Engineers P: APPM 1350 or MATH 1300	PHYS 1110 -4- Gen. Physics I P/C: APPM 1350 or MATH 1300		CHEN 1310 -3- Introduction to Computing P/C: APPM 1350 or MATH 1300	Technical Elective I -3- *	H&SS Elective II -3- lower division
Fall	16	APPM 1350 -4- Calculus I for Engineers	CHEN 1211 -4- Gen Chem for Engineers C: CHEN 1221 \$	CHEM 1221 -1- General Chem Lab C: CHEN 1211 \$	GEEN 1400 -3- Engineering Projects	EVEN 1000 -1- Introduction to Environmental Engineering #	H&SS Elective I -3- lower division

- Courses marked thus are offered only in *SEMESTER* shown.

\$ - CHEN 1211 & CHEM 1221 must be taken concurrently.

() - Prerequisite or Co-requisite *required* before taking course listed.

**CHEN 2120-A grade of C or higher is needed to continue into CHEN courses.

Solid Mechanics options: CVEN 2121 Analytic Mechanics I (F,S; Phys1110, co-req APPM 2350); GEEN 2851 Statics for Engr (PHYS 1110, APPM 2350), MCEN 2023 Statics & Structures (F; APPM 1360);

Fluid Mechanics options: CVEN 3313 Theoretical Fluid Mechanics (S; Solid Mechanics); MCEN 3021 Fluid Mechanics (F,S; APPM 2360, Solid Mech), CHEN 3200 Chem Engr Fluid Mechanics (S; APPM2350/2360, CHEN2120/MCEN2023), GEEN 3853 Fluid Mech for Engrs (sum,APPM 2350/2360, GEEN 1300)

Thermodynamics options: AREN 2110 Thermo (F,S APPM1360, PHYS1110), CHEN 3320 Chem Eng Thermo (F; reqd chem proc option; CHEN2120, CHEM4521); GEEN 3852 Thermo for Engrs (sum, APPM2350), MCEN 3012 Thermodynamics (F,S reqd air quality option; APPM 2350)

Heat Transfer options: CHEN3210 Chem Eng Heat Transfer (F; Fluids, MCEN 3022 Heat Transfer (F,S; Thermo, Fluids)

*Tech electives: 3 cr can be lower division, others **must** be 3000 or 4000 level; one tech elective (3cr) **must** relate to earth science such as geology courses, engineering geology, CVEN Geotech I, etc.

Air/Earth Lab Field course such as: ATOC 1070 Weather & Atmos Lab, CVEN 3708 Geotech Eng, EVEN 4100 Env Sampling, GEOG 4411 Methods of Soil Analysis, GEOL 2700-2 Intro to Field Geol, GEOL 3010 Intro to Mineralogy, GEOL4716 Env Field Geol. If course is less than 3 credits, remaining credits must be upper division tech electives.

Engineering Economics options: CVEN 4147 Civil Engineering Systems (F), EMEN 4100 Business Methods and Economics for Engineers, CVEN 3246 Introduction to Construction (F,S,Sum)

Probability and Statistics options: APPM 4570 Statistical Methods (F,S; APPM 1360), CHEN 3010 Appl Data Analysis (F, CHEN1310, APPM 2360), CVEN 3227 Probability, Statistics, & Decision (S)

Writing Course: GEEN 3000 Prof Comm Engrs, HUEN 3100 Humanities for Engrs, WRTG 3030 Writing Sci & Society, WRTG 3035 Tech Comm & Design; PHYS 3050 Wrtg for Phys

Key: P: Prereq C: Co-req All MCEN courses require grade of C for any pre/co req Fall 2015