

SEM	CR	CVEN BLOCK DIAGRAM					
8 TH SEM (SPR)	14	CVEN XXXX-3 Proficiency IV	CVEN XXXX-3 Concentration II	Technical Elective-2	Technical Elective-3		S-H Elective-3 (upper-level)
7 TH SEM (FALL)	16	CVEN XXXX-3 Proficiency III	CVEN 3602-3 Transportation Systems #	CVEN XXXX-3 Concentration I		CVEN 4899-4 Senior Design Project (SR standing) #	S-H Elective-3 (upper-level)
6 TH SEM (SPR)	15	CVEN 3227-3 Probability Statistics & Decision for Civil Engrs. (Restricted to JR/SRs) #	CVEN XXXX-3 Proficiency I	CVEN 3111-3 Analytical Mechanics II (CVEN 2121, co-req APPM 2360) #	CVEN XXXX-3 Proficiency II		WRTG 3030-3 Writing on Science & Society (JR standing)
5 TH SEM (FALL)	15	CVEN 3246-3 Intro. To Construction (JR standing or instructor consent)	CVEN 3323-3 Hydraulic Engineering (CVEN 3313) #	CVEN 3525-3 Structural Analysis (CVEN 3161)	CVEN 3414-3 Fund. of Env. Engr. (CHEN 1211, APPM 1360)	CVEN 3708-3 Geotechnical Engineering I (CVEN 3161)	
4 TH SEM (SPR)	16	APPM 2360-4 Introduction to Linear Algebra & Differential Equations (APPM 1360)	CVEN 3313-3 Theoretical Fluid Mechanics (CVEN 2121) #	CVEN 3161-3 Mechanics of Materials I (CVEN 2121, co-req. APPM 2360)	CVEN 3698-3 Engineering Geology #	GEEN 1300-3 Intro Engr. Computing (co-req. APPM 1350 or equiv.)	
3 RD SEM (FALL)	18	APPM 2350-4 Calculus III for Engineers (APPM 1360)	PHYS 1120-4 PHYS 1140-1 Gen.Phys II/Lab (PHYS 1110, co-req APPM 1360)	CVEN 2121-3 Analytical Mechanics I (PHYS 1110, co-req. APPM 2350)		AREN 2110-3 Thermodynamics (PHYS 1110, co-req. APPM 1360)	S-H Elective-3
2 ND SEM (SPR)	17	APPM 1360-4 Calculus II for Engineers (APPM 1350)	PHYS 1110-4 Gen. Physics I (co-req. APPM 1350)		CVEN 2012-3* Introduction to Geomatics (APPM 1350) #	AREN 1027-3* Engineering Drawing	S-H Elective-3
1 ST SEM (FALL)	17	APPM 1350-4 Calculus I for Engineers (2 yr. HS alg., 1yr geom., ½ yr. trig.; or approval by faculty advisor)	CHEN 1211-3 Gen Chem for Engineers \$ (1 yr. HS chem. or CHEM 1021, HS Alg, co-req. CHEM 1221)	CHEM 1221-2 General Chemistry Lab for Engineers \$	Basic Engineering Elective/ GEEN 1400-3**	CVEN 1317-2 Introduction to Civil & Environmental Engineering #	S-H Elective-3

Fall 2012/ revised October 2013

- # Courses marked thus are offered only in SEMESTER shown (fall or spring).
 \$ CHEN 1211 & CHEM 1221 must be taken concurrently.
 * Both CVEN 2012 and AREN 1027 may be taken earlier or later in the program
 ** See curriculum description for acceptable courses

Civil Engineering Concentrations

GEOTECHNICAL ENGINEERING

- Fundamental** - CVEN 3708 Geotech Engr 1 (**Spring or Fall**), **prereq CVEN 3161**
Proficiency - CVEN 3718 Geotech Engr 2 (**Spring or Fall**), **prereq CVEN 3708**
Concentration - CVEN 4728 Foundation Engineering (**Fall**), **prereq CVEN 3718 or consent**
CVEN 5748 Design of Earth Structures (**Spring**), **prereq CVEN 5708 or consent**
OR any 4XXX level or above Geotech Engr. course

WATER RESOURCES ENGINEERING

- Fundamentals** - CVEN 3323 Hydraulic Engineering (**Fall**), **prereq CVEN 3313**
Proficiency - CVEN 4333 Engineering Hydrology (**Spring**), **prereq CVEN 3313, coreq CVEN 3227**
Concentration - CVEN 4353 Ground Water Engineering (**Fall**), **prereq CVEN 3313**
CVEN 5363 Modeling of Hydrologic Systems (**Summer**), **prereq CVEN 3323 or coreq**
CVEN 4333
CVEN 4383 Groundwater Modeling (**Spring**), **rec. prereq CVEN 4333**

CONSTRUCTION ENGINEERING AND MANAGEMENT

- Fundamentals** - CVEN 3246 Introduction to Const (**Spring or Fall**), **prereq JR or instructor consent**
Proficiency - CVEN 3256 Const Equipment and Methods (**Fall**), **rec. prereq CVEN 3246**
Concentration - AREN 4506 Project Management I, **prereq CVEN 3246**
AREN 4606 Project Management II (**Spring**), **prereqs CVEN 3246 and 4506**

STRUCTURAL ENGINEERING/ STRUCTURAL MECHANICS

- Fundamentals** - CVEN 3525 Structural Analysis (**Spring or Fall**), **prereq CVEN 3161**
Proficiency - CVEN 4545 Steel Design (**Spring**) or CVEN 4555 Reinforced Concrete (**Fall**), **prereq**
CVEN 3525 for both
Concentration - CVEN 4161 Mechanics of Materials II (**Spring**), **prereq CVEN 3161**
AND one of the following:
CVEN 4545 or 4555 (whichever not selected as proficiency)

ENVIRONMENTAL ENGINEERING

- Fundamentals** - CVEN 3414 Fundamentals of Environmental Engineering (**Spring or Fall**), **prereqs**
CHEN 1211 & APPM 1360
Proficiency - CVEN 3424 Water and Wastewater (**Spring**), **prereq CVEN 3414**
Concentration - **Any two of the following:**
CVEN 4404 Water Chemistry (Lab CVEN 4414) (**Fall**), **prereqs CHEN 1211 & CVEN**
3414
CVEN 3434 Introduction to Applied Ecology (**Spring**), **prereqs CHEN 1211 & CHEM**
1221
CVEN 4474 Hazardous & Industrial Waste Mgmt (**Fall**), **prereq CVEN 3414**
CVEN 4484 Intro to Environmental Microbiology, (**Spring**), **prereqs CHEN 1211;**
CHEM 1221; APPM 1350, 1360 and 2350