

**CIVIL ENGINEERING PROGRAM: FIRST AND SECOND YEARS**

	<b>SEMESTER I</b>	<b>SEMESTER II</b>	<b>SEMESTER III</b>	<b>SEMESTER IV</b>
<b>MATHEMATICS</b>	MATH UN1101 (3)	MATH UN1102 (3)	APMA E2000 (4) and E2001 (0)	APMA E2101 (3) Intro. to applied math.
<b>PHYSICS</b> (three sequences, choose one)	UN1401 (3)  UN1601 (3.5) UN2801 (4.5)	UN1402 (3)  UN1602 (3.5) UN2802 (4.5)	Lab UN1494 (3) <b>or</b> chem. lab  Lab UN3081 (2)	
<b>CHEMISTRY</b>	one-semester lecture (3–4): UN1403 <b>or</b> UN1404 <b>or</b> UN2045 <b>or</b> UN1604 Chem lab UN1500 (3) either semester <b>or</b> physics lab			
<b>GEOLOGY</b>	EESC UN2100 (4.5), UN2200 (4.5), UN2300 (4.5), or equivalent			
<b>MECHANICS</b>	ENME E3105 (4) either semester			
<b>CIVIL ENGINEERING</b>	CIEN E3000 (3) (Spring semester; recommended but not required)			CIEN E3004 (3) Urban Infrastructure systems
<b>UNIVERSITY WRITING</b>	CC1010 (3) either semester			
<b>REQUIRED NONTECHNICAL ELECTIVES</b>			HUMA CC1001, COCI CC1101, <b>or</b> Global Core (3–4)  HUMA UN1121 <b>or</b> UN1123 (3)	HUMA CC1002, COCI CC1102, <b>or</b> Global Core (3–4)  ECON UN1105 (4) <b>and</b> UN1155 recitation (0)
<b>COMPUTER SCIENCE</b>	Computer Language: ENGI E1006 (3) or equivalent (any semester)			
<b>PHYSICAL EDUCATION</b>	UN1001 (1)	UN1002 (1)		
<b>THE ART OF ENGINEERING</b>	ENGI E1102 (4) either semester			

**CIVIL ENGINEERING: THIRD AND FOURTH YEARS**

	<b>SEMESTER V</b>	<b>SEMESTER VI</b>	<b>SEMESTER VII</b>	<b>SEMESTER VIII</b>
<b>CORE REQUIRED COURSES</b>	<p>ENME E3113 (3) Mech. of solids</p> <p>ENME E3161 (4) Fluid mech.</p>	<p>CIEE E3125 (3) Structural design</p> <p>CIEE E3126 (1) Computer-aided struct. design</p> <p>CIEE E3141 (4) Soil mech.</p>	<p>CIEE E3111 (3.5) Uncertainty and risk in civil infrastructure systems</p> <p>CIEE E3129 (3) Proj. mgmt. for construction</p>	<p>CIEE E3128 (4) Design projects</p>
<b>CONCENTRATIONS</b>	<b>GEOTECH ENG. (GE) OR STRUCT. ENG. (SE)</b>	<p>ENME E3106 (3) Dynamics and vibrations</p> <p>ENME E3114 (4) Exper. mech. of materials</p> <p>CIEE E3121 (3) Struct. analysis</p>	<p>ENME E3332 (3) A first course in finite elements</p> <p>CIEE E3127 (3) Struct. design projects (SE) or CIEE E4241 (3) Geotech. eng. fund. (GE)</p>	
	<b>TECH ELECTIVES</b>	3 points	3 points	9 points
	<b>CIVIL ENG. AND CONSTR. MGMT.</b>	<p>ENME E3114 (4) Exper. mech. of materials</p> <p>CIEE E3121 (3) Struct. analysis or EACE E3250 (3) Hydrosystems eng.</p>	<p>CIEE E4133 (3) Capital facility planning and financing</p> <p>CIEE E3127 (3) Struct. design projects or CIEE E4241 (3) Geotech. eng. fund.</p>	<p>CIEE E4131 (3) Princ. of constr. tech.</p>
	<b>TECH ELECTIVES</b>	6 points	3 points	6 points
	<b>WATER RES./ ENVIRON. ENG.</b>	<p>EACE E3255 (3) Environ. control / pollution</p> <p>EACE E3250 (3) Hydrosystems eng.</p> <p>CIEE E3303 (1) Independent studies</p>	<p>EACE E4350 (3) Plan./mgmt. of urban hydro systems.</p>	<p>EACE E4163 (3) Sust. water treat. / reuse</p> <p>EACE E4006 (3) Field methods for environ. eng.</p>
	<b>TECH ELECTIVES</b>	6 points	3 points	6 points
<b>NONTECH ELECTIVES</b>	3 points	3 points	3 points	
<b>TOTAL POINTS</b>	13	21	18.5	13