

### Sample Programs of Study for a CENG Sub-discipline Focus

Typical course work for the first two years of study is provided in the Typical Program of Studies on page 1. Sample programs for an optional focus in a Civil, Environmental and Sustainable Engineering sub-discipline are provided below. Students should work with a faculty advisor to finalize their selection of technical electives. A design-focused technical elective may be substituted for one of the courses marked with a "+", and an analysis-focused technical elective may be substituted for one of the courses marked with a "\*".

CONSTRUCTION ENGINEERING AND MANAGEMENT FOCUS			
<b>3rd Year</b>	CENG 121A/121AL - GEOTECH I (3/1) CENG 145 - TRANS ENGR DES CENG 148 - STRUCT SYS (4/1) CENG 118 - CONST MGMT (3)	AMTH 112 - RISK IN CIVIL ENG CENG 121B - GEOTECH II (2) CENG 125 - MUNICIPAL ENGR L&L (3/1) CENG 141 - FLUIDS/HYDR L&L (4/1) CENG 184 - CONST ADMIN (3) +	CENG 128 - ENGR ECON (3) CENG 140 - WATER RES L&L (4/1) CENG 143 - ENVIRON ENG L&L (3/1) CENG 192A - CENG PROJ DEVL (1) CENG 119 - DES SUSTAIN CONSTRUCT
<b>4th Year</b>	CENG 192B - CENG PRACTICE (2) CENG 192C - CENG PROF DEVL (1) CENG 186 - CONST PLANNING + UNIV CORE REQUIREMENT UNIV CORE REQUIREMENT	CENG 193 - PROJECT DESIGN (4) <b>CENG TECH ELECTIVE #</b> UNIV CORE REQUIREMENT UNIV CORE REQUIREMENT	CENG 194 - CENG PROJ COMM (1) CENG 187 - HEAVY CONSTRUCTION + UNIV CORE REQUIREMENT UNIV CORE REQUIREMENT

# TECH ELECTIVE MUST BE A Digital Information Management and Analysis (DIMA) COURSE (CENG 160 OR CENG 182)

GEOTECHNICAL ENGINEERING FOCUS			
<b>3rd Year</b>	CENG 121A - GEOTECH I (3/1) CENG 145 - TRANS ENGR CENG 148 - STRUCT SYS (4/1) UNIV CORE REQUIREMENT	AMTH 112 - RISK IN CIVIL ENG CENG 121B - GEOTECH II (2) CENG 125 - MUNICIPAL ENGR (3/1) CENG 141 - FLUIDS/HYD (4/1) CENG 135 - CONC DES (4/1)	CENG 128 - ENGR ECON (3) CENG 140 - WATER RES (4/1) CENG 143 - ENVIRON ENG (3/1) CENG 192A - CENG PROJ DEVL (1) CENG 138 - GEOTECH DES L&L (4/1)
<b>4th Year</b>	CENG 192B - CENG PRACTICE (2) CENG 192C - CENG PROF DEV (1) <b>CENG TECH ELECTIVE</b> UNIV CORE REQUIREMENT UNIV CORE REQUIREMENT	CENG 160 - GIS (3) CENG 193 - CENG PROJ DES CENG 137 - EQK ENGR DES UNIV CORE REQUIREMENT	CENG 182 - BIM (3) CENG 194 - CENG PROJ COMM (1) UNIV CORE REQUIREMENT UNIV CORE REQUIREMENT

STRUCTURAL ENGINEERING FOCUS			
<b>3rd Year</b>	CENG 121A - GEOTECH I (3/1) CENG 145 - TRANS ENGR CENG 148 - STRUCT SYS (4/1) UNIV CORE REQUIREMENT	AMTH 112 - RISK IN CIVIL ENG CENG 121B - GEOTECH II (2) CENG 125 - MUNICIPAL ENGR (3/1) CENG 141 - FLUIDS/HYD (4/1) CENG 135 - CONC DES (4/1)	CENG 128 - ENGR ECON (3) CENG 140 - WATER RES (4/1) CENG 143 - ENVIRON ENG (3/1) CENG 192A - CENG PROJ DEVL (1) CENG 133 - TIMBER DES *
<b>4th Year</b>	CENG 192B - CENG PRACTICE (2) CENG 192C - CENG PROF DEV (1) CENG 134 - STEEL DES * UNIV CORE REQUIREMENT UNIV CORE REQUIREMENT	CENG 193 - PROJECT DESIGN (4) CENG 137 - EQK ENGR DES UNIV CORE REQUIREMENT UNIV CORE REQUIREMENT	CENG 182 - BIM (3) CENG 194 - CENG PROJ COMM (1) CENG 138 - GEOTECH DES L&L (4/1) UNIV CORE REQUIREMENT

TRANSPORTATION ENGINEERING FOCUS			
<b>3rd Year</b>	CENG 121A - GEOTECH I (3/1) CENG 145 - TRANS ENGR CENG 148 - STRUCT SYS (4/1) UNIV CORE REQUIREMENT	AMTH 112 - RISK IN CIVIL ENG CENG 121B - GEOTECH II (2) CENG 125 - MUNICIPAL ENGR (3/1) CENG 141 - FLUIDS/HYD (4/1) CENG 150 - TRAFFIC DES	CENG 128 - ENGR ECON (3) CENG 140 - WATER RES (4/1) CENG 143 - ENVIRON ENG (3/1) CENG 192A - CENG PROJ DEVL (1) CENG 151 - SPEC TOPICS TRAN +
<b>4th Year</b>	CENG 192B - CENG PRACTICE (2) CENG 192C - CENG PROF DEV (1) CENG 149 - CIVIL SYS ENG + UNIV CORE REQUIREMENT UNIV CORE REQUIREMENT	CENG 160 - GIS (3) CENG 193 - CENG PROJ DES (4) <b>CENG TECH ELECTIVE</b> UNIV CORE REQUIREMENT	CENG 194 - CENG PROJ COMM (1) CENG 197 OR CENG 199 + UNIV CORE REQUIREMENT UNIV CORE REQUIREMENT

WATER RESOURCES / ENVIRONMENTAL ENGINEERING FOCUS			
<b>3rd Year</b>	CENG 121A - GEOTECH (3/1) CENG 145 - TRANS ENGR CENG 148 - STRUCT SYS (4/1) UNIV CORE REQUIREMENT	AMTH 112 - RISK IN CIVIL ENG CENG 121B - GEOTECH II (2) CENG 125 - MUNICIPAL ENGR (3/1) CENG 141 - FLUIDS/HYD (4/1) CENG 123/123L (3/1) or CENG 144	CENG 128 - ENGR ECON (3) CENG 140 - WATER RES (4/1) CENG 143 - ENVIRON ENG (3/1) CENG 192A - CENG PROJ DEVL (1) CENG 142 or CENG 162
<b>4th Year</b>	CENG 192B - CENG PRACTICE (2) CENG 192C - CENG PROF DEV (1) CENG 139, CENG 161 +, or CENG 144 UNIV CORE REQUIREMENT UNIV CORE REQUIREMENT	CENG 160 - GIS (3) CENG 193 - CENG PROJ DES (4) CENG 123/123L (3/1) UNIV CORE REQUIREMENT	CENG 194 - CENG PROJ COMM (1) CENG 124, CENG 142, or CENG 162 UNIV CORE REQUIREMENT UNIV CORE REQUIREMENT