

# CIVIL ENGINEERING (B.S.) GENERAL CIVIL ENGINEERING CONCENTRATION

Course	Title	Hours
<b>Freshman</b>		
<b>Fall</b>		
ENG 104 or ENG 103 or ENG 111	COMPOSITION I or English Composition I with Co-requisite Support or COMPOSITION & LITERATURE FOR L	3
CHEM 141 & CHML 141	GENERAL CHEMISTRY I and GENERAL CHEMISTRY LAB	4
MATH 241	CALCULUS I WITH LABORATORY	3
UNIV 100	UNIVERSITY SUCCESS	2
Humanities & Fine Arts Option		3
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
ENG 105 or ENG 112	COMPOSITION II or COMPOSITION	3
MATH 242	CALCULUS II WITH LABORATORY	3
PHY 211 & PHYL 211	General Physics I and GENERAL PHYSICS LAB I	4
Social & Behavioral Science Option		3
Pathway Option		3
<b>Hours</b>		<b>16</b>
<b>Sophomore</b>		
<b>Fall</b>		
BIO 101 & BIOL 101 or SCI 205	INTRO TO BIOLOGICAL SCIENCE or EARTH & SPACE SCIENCE	3
CIV 201	ENGINEERING GRAPHICS	2
CIV 222	ENGINEERING MECHANICS I	3
MATH 243	CALCULUS III WITH LABORATORY	3
PHY 212 & PHYL 212	General Physics II and GENERAL PHYSICS LAB II	4
Pathway Option		3
<b>Hours</b>		<b>18</b>
<b>Spring</b>		
CIV 223	ENGINEERING MECHANICS II	3
CIV 240	STRENGTH OF MATERIALS	3
MATH 244	CALCULUS IV WITH LABORATORY	3
MATH 368	DIFFERENTIAL EQUATIONS	3
UNIV 200	CIVIC ENGAGEMENT	1
Pathway Option		3
<b>Hours</b>		<b>16</b>
<b>Junior</b>		
<b>Fall</b>		
CIV 320	STRUCTURAL ANALYSIS	3
CIV 330	FLUID MECHANICS LECTURE	3
CIV 340 & CIVL 340	INTRO TO ENVIRONMENTAL ENGINEER and ENVIRONMENTAL ENGINEERING LAB	4
CIV 355	ENGINEERING ECONOMY	3
MATH 307	PROBLYT & STATISTICS/ENGINEERG	3
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
CIVL 330	FLUID MECHANICS LAB	1
CIV 360	DESIGN OF STEEL STRUCTURES	3
CIV 370	WATER RESOURCES ENGINEERING	3
CIV 380 & CIVL 380	INTRO TO GEOTECHNICAL ENGINEER and GEOTECHNICAL ENGINEERING LAB	4

CIV 390	INTRO TO TRNSPRTN ENGINEERING	3
Civil Engineering Elective		3
<b>Hours</b>		<b>17</b>
<b>Senior</b>		
<b>Fall</b>		
CIV 410	CAPSTONE DESIGN I	3
CIV 420	DESIGN OF CONCRETE STRUCTURES	3
CIVL 421	STRUCTURES & MATERIALS LAB	1
CIV 430	FOUNDATION ENGINEERING	3
CIV 461	PROF & ETHCL IS IN CIVIL ENGIN	1
Civil Engineering Elective		3
Civil Engineering Elective		3
<b>Hours</b>		<b>17</b>
<b>Spring</b>		
CIV 411	CAPSTONE DESIGN II	3
Civil Engineering Elective		3
Civil Engineering Elective		3
Humanities & Fine Arts Option		3
<b>Hours</b>		<b>12</b>
<b>Total Hours</b>		<b>127</b>

## Notes:

- Candidates that transfer 12 or more hours of college credit are exempt from UNIV 100 UNIVERSITY SUCCESS, however, the student must take 2 hours of general electives to replace the UNIV course.
- Students are required to take the Mathematics Placement Test to determine if they need to take any math courses before taking MATH 241 CALCULUS I WITH LABORATORY (C).
- The students are required to contact their advisers or Department Chair prior to taking any civil engineering elective.
- The students must take the Fundamentals of Engineering (FE) exam during the last semester, prior to graduation.
- Engineering classes are generally offered once a year.
- No pre-requisite violations are allowed. If a student has a pre-requisite violation, they may not be able to graduate on time.
- Online Graduation Clearance (**to be completed during the graduating semester only**).

## Civil Engineering Technical Electives

Code	Title	Hours
CIV 310 & CIVL 310	ENGINEERING SURVEYING and ENGINEERING SURVEYING LAB	3
CIV 431	TRAFFIC ENGINEERING	3
CIV 441	WATER AND WASTEWATER TREATMENT	3
CIV 451	COMPTR METHODS IN CIV ENGINEER	3
CIV 466	ADVD DESIGN OF HYDRAULIC STRUC	3
CIV 468	HAZARDOUS WASTE ENGINEERING	3
CIV 475	PAVEMENT DESIGN	3
CIV 476	ADVD DESIGN OF STEEL STRUCTURE	3
CIV 477	ADVD DESIGN OF CONCRETE STRUCT	3
CIV 481	SPCL PROBLEMS IN CIV ENGR	3
CIV 491	INTRNSHPS IN CIV ENGINEERING I	1-3
CIV 492	INTRNSHPS N CIV ENGINEERING II	1-3

At least one civil engineering elective must be chosen from:

<b>Code</b>	<b>Title</b>	<b>Hours</b>
CIV 441	WATER AND WASTEWATER TREATMENT	3

(required environmental engineering elective).

At least one civil engineering elective must be chosen from:

<b>Code</b>	<b>Title</b>	<b>Hours</b>
CIV 431	TRAFFIC ENGINEERING	3
CIV 475	PAVEMENT DESIGN	3

(required transportation engineering elective). The selection of other courses requires the approval of adviser and Dept. Chair.

Basic Science Elective:

<b>Code</b>	<b>Title</b>	<b>Hours</b>
BIO 101 & BIOL 101	INTRO TO BIOLOGICAL SCIENCE and INTRO TO BIO SCI LAB	3
SCI 205	EARTH & SPACE SCIENCE	3