BS IN CIVIL ENGINEERING

Below is a sample plan of study. Consult your degree audit for your program requirements.

First Term		Hours
ENGL 1110	College Composition I	3
MATH 1850	Single Variable Calculus I	4
CHEM 1230	General Chemistry I	4
CIVE 1000	Freshman Civil Engineering Experience	1
CIVE 1100	Civil Engineering Measurements	3
CIVE 1110	Computer Aided Drafting for Civil Engineers	1
	Hours	**16**
Second Term		
ENGL 2950	Science And Technical Report Writing	3
MATH 1860	Single Variable Calculus II	4
PHYS 2130	Physics For Science And Engineering Majors I	5
CIVE 2000	Professional Development	1
Social Sciences Core		3
	Hours	**16**
Third Term		
MATH 2850	Elementary Multivariable Calculus	4
MATH 2890	Numerical Methods And Linear Algebra	3
PHYS 2140	Physics For Science And Engineering Majors II	5
CIVE 1150	Engineering Mechanics: Statics	3
Science Elective		3
	Hours	**18**
Fourth Term		
MATH 2860	Elementary Differential Equations	3
MIME 2300	Engineering Dynamics	3
CIVE 1160	Engineering Mechanics: Strength Of Materials	3
Arts/Humanities Core		3
Social Sciences Core		3
	Hours	**15**
Fifth Term		
CIVE 3940	Co-Op Experience	1
	Hours	**1**
Sixth Term		
CIVE 1170	Fluid Mechanics For Civil Engineers	3
CIVE 2110	Civil Engineering Materials With Laboratory	3
CIVE 3120	Civil Engineering Systems Analysis	3
CIVE 3310	Structural Analysis	3
FE Elective		3
	Hours	**15**
Seventh Term		
CIVE 3940	Co-Op Experience	1
	Hours	**1**
Eighth Term		
CIVE 3210	Soil Mechanics	3
CIVE 3510	Transportation Engineering I	3
CIVE 3610	Water Supply And Treatment	3
CIVE 3620	Air Pollution Engineering I	3
CIVE 3630	Wastewater Engineering	3
	Hours	**15**
Ninth Term		
CIVE 3940	Co-Op Experience	1
	Hours	**1**
Tenth Term		
CIVE 3220	Foundation Engineering	3
CIVE 3410	Steel Design I	3
CIVE 3420	Reinforced Concrete Design I	3
CIVE 3520	Transportation Engineering II	3
MIME 4000	Engineering Statistics I	3
	Hours	**15**
Eleventh Term		
CIVE 4750	Senior Design Projects	3
MIME 2600	Engineering Economics	3
Technical Elective		3
Technical Elective		3
Diversity of US		3
Arts/Humanities Core/Non-US Diversity		3
	Hours	**18**
	Total Hours	**131**

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics. (Analysis)
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors. (Synthesis)
3. An ability to communicate effectively with a range of audiences. (Application)
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts. (Application)
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives. (Application)
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions (Analysis)
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies. (Application) Educational objectives based on Bloom s taxonomy are given in brackets with each outcome. Furthermore, civil engineering programs must demonstrate that their students attain the following program criteria:

Outcome A: The graduates can apply knowledge in mathematics through differential equations; calculus-based physics; and general chemistry,

and at least one additional area of science. The graduates are also able to apply probability and statistics to address uncertainty. (Application)
Outcome B: The graduates can analyze and solve problems in a minimum of four (4) recognized major CE areas. (Analysis)
Outcome C: The graduates have the ability to conduct laboratory experiments and to critically analyze and interpret data in at least two technical areas of CE. (Analysis)
Outcome D: The graduates have the ability to perform CE design in at least two civil engineering contexts by means of design experiences integrated throughout the professional component of the curriculum. The graduates have the ability to include principles of sustainability in design. (Synthesis)
Outcome E: The graduates have an understanding of professional practice issues such as: procurement of work; bidding versus quality-based selection processes; how the design professionals and the construction professions interact to construct a project; the importance of professional licensure and continuing education; and/or other professional practice issues. (Analysis)
Outcome F: The graduates have an understanding of the basic concepts in project management, business, public policy, and leadership through discussion in different courses. (Comprehension)