BACHELOR OF SCIENCE IN CIVIL ENGINEERING – STRUCTURAL ENGINEERING, MECHANICS, AND MATERIALS

Code	Title	Credit Hours
Wellness Requirement		
APPH 1040	Scientific Foundations of Health	2
or APPH 10	The Science of Physical Activity and Health	
or APPH 10	Flourishing: Strategies for Well-being and Resilience	
Core IMPACTS		
Institutional Priority		
CS 1371	Computing for Engineers	3
Mathematics and Quantitative Skills		
MATH 1552	Integral Calculus [3]	4
Political Science and U.S. History		
HIST 2111	The United States to 1877	3
or HIST 2112	The United States since 1877	
or INTA 1200	American Government in Comparative Perspective	
or POL 1101	Government of the United States	
or PUBP 3000	American Constitutional Issues	
Communicating in Writing		
ENGL 1101	English Composition I	3
ENGL 1102	English Composition II	3
Arts, Humanities, and Ethics		
Any HUM		6
Technology, Mathematics, and Sciences		
PHYS 2211	Introductory Physics I [2,3]	4
PHYS 2212	Introductory Physics II	4
MATH 1551	Differential Calculus [3]	2
MATH 1553	Introduction to Linear Algebra [3]	2
or MATH 1554	Linear Algebra	
or MATH 1564	Linear Algebra with Abstract Vector Spaces	
Social Sciences		
Select one of the following:		3
ECON 2100	Economic Analysis and Policy Problems	
ECON 2101	The Global Economy	
ECON 2105	Principles of Macroeconomics	
ECON 2106	Principles of Microeconomics	
Any SS		6
Field of Study		
COE 2001	Statics [3]	2
MATH 2551	Multivariable Calculus	4
MATH 2552	Differential Equations [3]	4
CHEM 1310	Principles of General Chemistry for Engineers [3]	4
Select one of the following:		4
BIOS 1107 & 1107L	Biological Principles and Biological Principles Laboratory	
BIOS 1108 & 1108L	Organismal Biology and Organismal Biology Laboratory	
EAS 2600	Earth Processes	
Major Requirements		
Ethics Requirement [1]		
CEE 1070	Engineering Graphics for Civil and Environmental Engineering	1
CEE 1090	Exploring Civil and Environmental Engineering	2
CEE 2040	Dynamics	2
CEE 2090	Civil and Environmental Engineering Systems	3
CEE 2300	Environmental Engineering Principles	3
CEE 3020	Civil Engineering Materials	3
CEE 3040	Fluid Mechanics	3
CEE 3090	Data Analytics in Civil and Environmental Engineering	3
Select one of the following:		3
CEE 3770	Statistics and Applications	
ISYE 3770	Statistics and Applications	
MATH 3670	Probability and Statistics with Applications	
CEE 4090	Capstone Design	3
College of Engineering Requirements		
COE 3001	Mechanics of Deformable Bodies	3
Structural Engineering, Mechanics, and Materials Concentration		
CEE 3051	Introduction to Structural Engineering	3
CEE 3055	Structural Analysis	3
Concentration electives		
Select one of the following:		3
CEE 4510	Structural Steel Design	
CEE 4520	Reinforced Concrete Design	
CEE 4530	Timber and Masonry Design	
Select one of the following:		3
CEE 4406	Applied Geotechnics	
CEE 4510	Structural Steel Design	
CEE 4520	Reinforced Concrete Design	
CEE 4530	Timber and Masonry Design	
CEE 4540	Infrastructure Rehabilitation	
CEE 4550	Structural Analysis II	
CEE 4551	Historic Structures	
CEE 4552	Introduction to Finite Element Methods	
CEE 4560	Origami Engineering	
CEE 4791	Mechanical Behavior of Composites	
CEE 4793	Composite Materials and Processes	
CE Breadth Electives		
Select two of the following:		6
CEE 3051	Introduction to Structural Engineering	
CEE 4100	Construction Engineering and Management	
CEE 4200	Hydraulic Engineering	
CEE 4300	Environmental Engineering Systems	
CEE 3400	Introduction to Geotechnical Engineering	
CEE 4600	Transportation Planning, Operations, and Design	
CEE 4200	Hydraulic Engineering	3

or CEE 3400Introduction to Geotechnical Engineering

CE Technical Electives	
CE Electives [4]	9
Approved Electives	
Approved Electives [5]	6
Total Credit Hours	**128**

No pass-fail allowed, except for CS 1171.

CEE 4801 not allowed toward degree.

Students must earn a 2.0 average in all CEE courses.

[1] Students must complete one Ethics course during their program. For a complete list of Ethics courses, please see: Ethics

[2] If PHYS 2231 is taken, extra credit hour goes to Free Electives.

[3] Minimum grade of C is required.

[4] Any 3000-level or higher CEE course, with the exception of CEE 4801, CEE 8811, and CEE 8812. Maximum of 3 credit hours CEE 4699 and CEE 4900. Only one non-CEE course allowed: CHBE 2130, ME 3322, MSE 3001, COA 4010, CP 4010, CP 4020, CP 4310, and CP 4510.

[5] Maximum 3 credit hours CEE 2699 allowed. MATH 1113, PHYS 2802, PHYS 2XXX (AP credit), one-hour MUSI courses, GT 1000, and FREE XXXX are not allowed.