

Curriculum (Changes below effective spring 2015.)

The Bachelor of Science in Civil Engineering degree requires 128 credits. For credit toward the degree, a grade of "C" or better must be received in each course listed. In addition, all prerequisites for each mathematics, science or engineering course must be completed with a grade of "C" or better before enrollment is permitted. The degree components are listed below.

General Studies		
College Writing 1 (1), (2)	ENC 1101	3
College Writing 2 (1), (2)	ENC 1102	3
Intellectual Foundations Program: Society and Human Behavior Courses (1), (3)		6
Intellectual Foundations Program: Global Citizenship Courses (1), (3)		6
Intellectual Foundations Program: Creative Expressions Courses (1), (3)		6
Total		24

Basic Mathematics and Sciences		
Calculus with Analytic Geometry 1 (1), (4)	MAC 2311	4
Calculus with Analytic Geometry 2 (1), (4)	MAC 2312	4
Calculus with Analytic Geometry 3	MAC 2313	4
Engineering Mathematics 1	MAP 3305	3
Probability and Statistics for Engineers	STA 4032	3
General Chemistry 1 (1)	CHM 2045	3
General Chemistry Lab 1 (1)	CHM 2045L	1
Physics for Engineers 1 (1), (5)	PHY 2043	3
General Physics 1 Lab	PHY 2048L	1
Physics for Engineers 2 (1), (5)	PHY 2044	3
General Physics 2 Lab	PHY 2049L	1
Basic Science Elective (1):		
Physical Geology/Evolution of the Earth or	GLY 2010C	4 or
Biological Principles and Biological Principles Lab	BSC 1010, 1010L	4
Fundamentals of Surveying	SUR 2104C	3
Total		34

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Engineering Fundamentals		
Fundamentals of AutoCAD	CGN 2327	3
Fundamentals of Engineering	EGN 1002	3
Computer Applications in Engineering 1	EGN 2213	3
Statics	EGN 3311	3
Dynamics	EGN 3321	3
Strength of Materials	EGN 3331	3

Fundamentals of Surveying	SUR-2104C	3
Fundamentals of Surveying	SUR2101	2
Fundamentals of Surveying Lab	SUR2101L	1
Engineering Thermodynamics	EGN 3343	3
Total		21

Professional Core (6)		
Soil Mechanics (7)	CEG 3011C	3
Foundation Engineering	CEG 4012	3
Analysis of Structures (7)	CES 3102C	3
Structural Steel Design	CES 4605	3
Reinforced Concrete Design	CES 4702	3
Civil Engineering Materials (7)	CGN 3501C	3
Undergraduate Research in Civil Engineering 1	CGN 3910	1
Civil, Environmental and Geomatics Engineering Design 1 (2), (7) (Title change eff. summer 2015.)	CGN 4803C	3
Civil, Environmental and Geomatics Engineering Design 2 (2), (7) (Title change eff. summer 2015.)	CGN 4804C	3
Undergraduate Research in Civil Engineering 2	CGN 4911	4
Applied Hydraulics (7)	CWR 3201C	3
Hydrologic Engineering	CWR 4202	3
Environmental Science and Engineering (7)	ENV 3001C	3
Water and Wastewater Treatment Systems	ENV 4514	3
Introduction to Transportation Engineering (7)	TTE 3004C	3
Transportation Planning and Logistics (7)	TTE 4005C	3
Total		43

Technical Electives, 6 credits from the list below (8)		
Construction Project Management	CCE 4031	3
Pavement Design	CEG 4126	3
GIS Application in Civil Engineering	CGN 4321	3
Advanced Hydraulic Systems	CWR 4223	3
Stormwater Modeling and Management	CWR 4307	3
Introduction to Terrestrial Laser Scanning	SUR 4150C	3
Transportation Operations and Logistics Management	TTE 4105	3
Total		6

Notes:

- (1) Contributes to University Core Curriculum requirements.
- (2) Contributes to Writing Across Curriculum (Gordon Rule) writing requirement.

(3) Intellectual Foundations Program courses, totaling 6, must be selected to satisfy Writing Across Curriculum (Gordon Rule) writing requirements.

(4) Contributes to Gordon Rule mathematics requirement.

(5) PHY 2048 and PHY 2049 (4 credits each) are acceptable substitutes, but only 6 credits will apply toward the degree.

(6) All professional core courses contain a communications component (writing or speaking).

(7) Includes a 1-credit laboratory.

(8) 6 credits may be taken from Department of Civil, Environmental and Geomatics Engineering graduate courses—this is highly recommended for students planning to pursue the B.S./M.S.

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Sample Four-Year Program of Study for Bachelor of Science in Civil Engineering

First Year, Fall (14 credits)		
College Writing 1	ENC 1101	3
General Chemistry 1 (eff. spring 2015)	CHM 2045	3
General Chemistry Lab 1 (eff. spring 2015)	CHM 2045L	1
Calculus with Analytic Geometry 1	MAC 2311	4
Fundamentals of Engineering	EGN 1002	3

First Year, Spring (14 credits)		
College Writing 2	ENC 1102	3
Physics for Engineers 1	PHY 2043	3
General Physics 1 Lab	PHY 2048L	1
Calculus with Analytic Geometry 2	MAC 2312	4
Fundamentals of AutoCAD	CGN 2327	3

First Year, Summer (6 credits)		
Fundamentals of Surveying	SUR-2104C	3
Fundamentals of Surveying	SUR2101	2
Fundamentals of Surveying Lab	SUR2101L	1
Intellectual Foundations Course		3

Second Year, Fall (14 credits)		
Physics for Engineers 2	PHY 2044	3
General Physics 2 Lab	PHY 2049L	1
Calculus with Analytic Geometry 3	MAC 2313	4
Statics	EGN 3311	3
Intellectual Foundations Course		3

Second Year, Spring (16 credits)		
Strength of Materials	EGN 3331	3

Engineering Mathematics 1	MAP 3305	3
Computer Applications in Engineering 1	EGN 2213	3
Basic Science Elective:		
Physical Geology/Evolution of the Earth or	GLY 2010C	4 or
Biological Principles and Biological Principles Lab	BSC 1010, 1010L	4
Intellectual Foundations Course		3 6

Second Year, Summer (6 credits)		
Analysis of Structures	CES 3102C	3
Intellectual Foundations Course		3
Fundamentals of Surveying	SUR 2104C	3
Engineering Thermodynamics	EGN 3343	3

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Third Year, Fall (12 credits)		
Civil Engineering Materials	CGN 3501C	3
Applied Hydraulics	CWR 3201C	3
Environmental Science and Engineering	ENV 3001C	3
Intellectual Foundations Course		3
Analysis of Structures	CES 3102C	3
Probability and Statistics for Engineers	STA 4032	3
Introduction to Transportation Engineering	TTE 3004C	3

Third Year, Spring (13 credits)		
Soil Mechanics	CEG 3011C	3
Introduction to Transportation Engineering	TTE 3004C	3
Dynamics	EGN 3321	3
Undergraduate Research in Civil Engineering 1	CGN 3910	1
Intellectual Foundations Course		3
Environmental Science and Engineering	ENV 3001C	3

Third Year, Summer (3 credits)		
Probability and Statistics for Engineers	STA 4032	3

Fourth Year, Fall (15 credits)		
Foundation Engineering	CEG 4012	3
Structural Steel Design	CES 4605	3
Reinforced Concrete Design	CES 4702	3
Civil, Environmental and Geomatics Engineering Design 1 (Title change eff. summer 2015.)	CGN 4803C	3
Civil Engineering Technical Elective		3

Undergraduate Research in Civil Engineering 2	CGN 4911	4
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Fourth Year, Spring (15 credits)		
Civil, Environmental and Geomatics Engineering Design 2 (Title change eff. summer 2015.)	CGN 4804C	3
Transportation Planning and Logistics	TTE 4005C	3
Water and Wastewater Treatment Systems	ENV 4514	3
Hydrologic Engineering	CWR 4202	3
Civil Engineering Technical Elective		3

Minors and Certificate Programs Appropriate for Civil Engineering

Approved by:

Department Chair: _____

College Curriculum Chair: _____

College Dean: _____

UUPC Chair: _____

Undergraduate Studies Dean: _____

UFS President: _____

Provost: _____

Date:

04/19/2015

04/20/2015

4/23/15

4/24/15

5/8/15

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