CIVIL ENGINEERING (B.S.) - ONLINE

Important: This degree plan is effective for those starting this degree program in fall 2022 through summer 2023. This degree plan will remain in effect for students who do not break enrollment or who do not change degree programs, concentrations, or cognates.

General Education/Foundational Skills Requirements

Code	Title	Hours
Communication & Information Literacy [1]		
ENGL 101	Composition and Rhetoric	3
Communications Elective		3
Information Literacy Elective		3
Information Literacy Elective		3
Technological Solutions & Quantitative Reasoning [1]		
UNIV 104	Instructional Technology for Successful Online Learning	0-3
Math Elective	MATH 114 or higher	4
Critical Thinking [1]		
RLGN 104	Christian Life and Biblical Worldview [2]	4
Critical Thinking Elective		3
Civic & Global Engagement [1]		
Cultural Studies Elective		3
Social & Scientific Inquiry [1]		
Natural Science Elective		4
Social Science Elective		3
Christianity & Contexts [1]		
BIBL 104	Survey of Old and New Testament	4
THEO 104	Introduction to Theology Survey [2]	4
Total Hours		**41-44**

1. Refer to the list of approved general education electives before enrolling in foundational skill requirements
2. Students transferring in 45 or more UG credit hours will have the requirement of RLGN 104 Christian Life and Biblical Worldview (4 c.h.) waived; Students transferring in 60 or more UG credit hours will also have the requirement of THEO 104 Introduction to Theology Survey (4 c.h.) waived

Major Requirements

Code	Title	Hours
Major Foundational Courses		
ENGR 270	Technical Communication [1]	3
MATH 131	Calculus and Analytic Geometry I [1,2]	4
MATH 132	Calculus and Analytic Geometry II [1,2]	4
PHYS 231	University Physics I [1,2]	4
Total Hours		**15**

1. Course may fulfill select general education requirements
2. Minimum grade of 'C' required

Code	Title	Hours
Core Courses		
CHEM 115	Essentials of General Chemistry	4
ENGI 220	Engineering Economy	3
ENGR 105	Introduction to Engineering I	2
ENGR 115	Introduction to Engineering II	2
ENGR 235	Statics	3
ENGR 240	Dynamics	3
ENGR 315	Fluid Dynamics	3
ENGR 330	Mechanics of Materials	3
ENGR 381	Introduction to Optimum Design	3
ENGR 481	Engineering Design I	3
ENGR 482	Engineering Design II	3
ENGV 205	Computer Aided Design	1
ENGV 225	Surveying	2
ENGV 320	Civil Engineering Lab [1]	2
ENGV 325	Structural Analysis	3
ENGV 345	Soil Mechanics	3
ENGV 355	Civil Engineering Lab II [1]	2
ENGV 365	Hydraulic Engineering	3
ENGV 380	Project and Construction Management	3
ENGV 390	Steel Structure Design	3
ENGV 395	Geotechnical Engineering	3
ENGV 410	Transportation Engineering	3
ENGV 420	Professional Practice	2
ENGV 425	Concrete Structure Design	3
ENGV 492	FE Exam	0
Science Elective [2]		3
Total Hours		**68**

1. Course offered in Intensive Format
2. Choose from the following approved science courses: BIOL 101 Principles of Biology (3 c.h.), ENVR 215 Principles of Environmental Science (3 c.h.), ENVR 220 Physical Geology (3 c.h.)

Code	Title	Hours
Technical Elective		
Technical Elective [1]		3
Total Hours		**3**

1. Choose from the following courses: ENGV 415 Special Topics in Construction Engineering (3 c.h.), ENGV 440 Special Topics in Structural Engineering (3 c.h.), ENGV 455 Special Topics Geotechnical Engineering (3 c.h.), or ENGV 460 Special Topics in Transportation Engineering (3 c.h.)

Code	Title	Hours
Quantitative Studies Courses		
ENGR 133	Calculus with MATLAB	1
ENGR 210	Probability and Statistical Methods for Engineering	3
MATH 430	Multivariable Calculus	3

Code	Title	Hours
MATH 432	Applied Differential Equations	3
PHYS 232	University Physics II	4
Total Hours		**14**

All applicable prerequisites must be met

Graduation Requirements

- **130** Total hours
- **2.0** Overall grade point average
- **32.5** Hours must be upper-level courses (300-400 level)
- **Grade of 'C'** Minimum required for **all** courses in the major, quantitative studies, and technical electives
- **25%** Of major taken through Liberty University
- **32.5** Hours must be completed through Liberty University
- **Grad App** Submission of Degree Completion Application must be completed within the last semester of a student's anticipated graduation date