CIVIL ENGINEERING (B.S.) - RESIDENT

Important: This degree plan is effective for those starting this degree program in fall 2025 through summer 2026. 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 101	Foundational Skills	1
Math Elective	MATH 114 or higher	4
Technology Competency [2]		0-3
Critical Thinking [1]		
RLGN 105	Introduction to Biblical Worldview [3]	2
Critical Thinking Elective		3
Civic & Global Engagement [1]		
EVAN 101	Evangelism and the Christian Life [3]	2
Cultural Studies Elective		3
Social & Scientific Inquiry [1]		
Natural Science Elective		4
Social Science Elective		3
Christianity & Contexts [1]		
BIBL 105	Old Testament Survey	2
BIBL 110	New Testament Survey	2
THEO 201	Theology Survey I [3]	2
THEO 202	Theology Survey II [3]	2
Total Hours		**42-45**

1. Refer to the list of approved general education electives before enrolling in foundational skill requirements
2. All students must pass the Computer Assessment OR complete applicable INFT course
3. Students transferring in 45 or more UG credit hours will have the requirements of RLGN 105 & EVAN 101 waived; Students transferring in 60 or more UG credit hours will also have the requirements of THEO 201 & THEO 202 waived

Major Requirements

Code	Title	Hours
Major Foundational Courses		
ENGR 270	Technical Communication [1,2]	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 [1,2,3]	4
Total Hours		**15**

1. Course may fulfill select general education requirements
2. Minimum grade of 'C' required
3. Lab Science courses required a lab.

Code	Title	Hours
Major Courses		
BIOL 101	Principles of Biology [1]	3
CHEM 121	General Chemistry I [1,2]	4
ENGI 220	Engineering Economy [1]	3
ENGR 110	Introduction to Engineering Fundamentals [1]	3
ENGR 235	Statics [1]	3
ENGR 240	Dynamics [1]	3
ENGR 315	Fluid Dynamics [1]	3
ENGR 330	Mechanics of Materials [1]	3
ENGR 481	Engineering Design I [1]	3
ENGR 482	Engineering Design II [1]	3
ENGV 205	Computer Aided Design [1]	3
ENGV 225	Surveying [1]	3
ENGV 320	Civil Engineering Lab [1]	2
ENGV 325	Structural Analysis [1]	3
ENGV 336	Civil Engineering Materials [1]	3
ENGV 345	Soil Mechanics [1]	3
ENGV 355	Civil Engineering Lab II [1]	2
ENGV 365	Hydraulic Engineering [1]	3
ENGV 380	Project and Construction Management [1]	3
ENGV 395	Geotechnical Engineering [1]	3
ENGV 400	Structural Design [1]	3
ENGV 410	Transportation Engineering [1]	3
ENGV 420	Professional Practice [1]	3
ENGV 435	Highway Engineering [1]	3
ENGV 492	FE Exam	0
Science or Math Elective [1,2,3]		3-4
Technical Electives		
Technical Elective [4]		3
Quantitative Studies		
ENGR 210	Probability and Statistical Methods for Engineering	3
MATH 231	Calculus and Analytical Geometry III	4
MATH 234	Introductory Differential Equations [1]	3
or MATH 334	Differential Equations	
Total Hours		**87-88**

1. Minimum grade of "C" is required.
2. Lab Science courses require a lab.
3. Choose from the following approved science courses: CHEM 122, MATH 221, or PHYS 232
4. Choose from the following courses: ENGV 415, ENGV 440, ENGV 455, or ENGV 460

All applicable prerequisites must be met

Graduation Requirements

- **133** Total hours
- **2.0** Overall grade point average
- **33.25** 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, including technical electives and quantitative studies, taken through Liberty University
- **33.25** 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
- **CSER** All requirements must be satisfied before a degree will be awarded

Course Sequence

Course	Title	Hours
Freshman Year		
First Semester		
ENGL 101	Composition and Rhetoric	3
MATH 131	Calculus and Analytic Geometry I [1]	4
RLGN 105	Introduction to Biblical Worldview	2
UNIV 101	Foundational Skills	1
Technology Competency [2]		0-3
ENGR 102	Introduction to Engineering	1
ENGR 110	Introduction to Engineering Fundamentals	3
ENGR 133	Calculus with MATLAB	1
CSER		
	Hours	**15-18**
Second Semester		
BIBL 105	Old Testament Survey	2
INQR 101	Inquiry	1
Communications Elective ENGR 270 3		3
Mathematics Elective MATH 132 1,3		4
Natural Science Elective PHYS 231 1,3		4
ENGI 220	Engineering Economy	3
CSER		0
	Hours	**17**
Sophomore Year		
First Semester		
RSCH 201	Research	3
ENGR 210	Probability and Statistical Methods for Engineering	3
ENGR 235	Statics	3
ENGV 205	Computer Aided Design	1
MATH 231	Calculus and Analytical Geometry III [1]	4
PHYS 232	University Physics II	4
CSER		0
	Hours	**18**
Second Semester		
Information Literacy Elective [3]		3
CHEM 121	General Chemistry I	4
ENGR 240	Dynamics	3
ENGR 330	Mechanics of Materials	3
ENGV 225	Surveying	2
MATH 334	Differential Equations	3
CSER		0
	Hours	**18**
Junior Year		
First Semester		
Cultural Studies Elective [3]		3
Social Sciences Elective [3]		3
ENGR 315	Fluid Dynamics	3
ENGV 325	Structural Analysis	3
ENGV 345	Soil Mechanics	3
ENGV 410	Transportation Engineering	3
CSER		0
	Hours	**18**
Second Semester		
BIBL 110	New Testament Survey	2
ENGV 320	Civil Engineering Lab	2
ENGV 380	Project and Construction Management	3
ENGV 390	Steel Structure Design	3
ENGV 395	Geotechnical Engineering	3
Technical Elective [5]		3
CSER		
	Hours	**16**
Senior Year		
First Semester		
THEO 201	Theology Survey I	2
ENGR 481	Engineering Design I	3
ENGV 355	Civil Engineering Lab II	2
ENGV 365	Hydraulic Engineering	3
ENGV 420	Professional Practice	2
ENGV 425	Concrete Structure Design	3
Science Elective [4]		3
CSER		0
	Hours	**18**
Second Semester		
EVAN 101	Evangelism and the Christian Life	2
THEO 202	Theology Survey II	2
Information Literacy Elective [3]		3
Critical Thinking Elective [3]		3
ENGR 482	Engineering Design II	3
ENGV 492	FE Exam	0
Technical Elective [5]		3
CSER		
	Hours	**16**
	Total Hours	**136-139**

[1] Minimum grade of 'C' is required

[2] All students must pass the Computer Assessment OR complete applicable INFT course; refer to www.liberty.edu/computerassessment for more information

[3] Refer to the list of approved general education electives at General Education courses before enrolling in foundational skills requirements

[4] Choose from the following Approved Science Elective Courses: BIOL 101, ENVR 215, or ENVR 220

[5] Choose from the following courses: ENGR 381, ENGV 415, ENGV 440, ENGV 455, or ENGV 460