

Important: This degree plan is effective for those starting this degree program in fall 2020 through summer 2021. 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 (41-44 hours)

| Course | | Hrs | Sem | Grade |
|--|-------------------------------|-----|-------|-------|
| Communication & Information Literacy (12 hours)¹ | | | | |
| ENGL 101 | Composition & Rhetoric | 3 | _____ | _____ |
| _____ | Communications Elective | 3 | _____ | _____ |
| _____ | Information Literacy Elective | 3 | _____ | _____ |
| _____ | Information Literacy Elective | 3 | _____ | _____ |

Technological Solutions & Quantitative Reasoning (4-7 hours)¹

| | | | | |
|------------|---|-----|-------|-------|
| UNIV 104 | Instructional Tech. for Online Learning | 0-3 | _____ | _____ |
| MATH _____ | Math Elective (MATH 114 or higher) | 4 | _____ | _____ |

Critical Thinking (7 hours)¹

| | | | | |
|----------|--|---|-------|-------|
| RLGN 104 | Christian Life & Biblical Worldview ² | 4 | _____ | _____ |
| _____ | Critical Thinking Elective | 3 | _____ | _____ |

Civic & Global Engagement (3 hours)¹

| | | | | |
|-------|---------------------------|---|-------|-------|
| _____ | Cultural Studies Elective | 3 | _____ | _____ |
|-------|---------------------------|---|-------|-------|

Social & Scientific Inquiry (7 hours)¹

| | | | | |
|-------|--------------------------|---|-------|-------|
| _____ | Natural Science Elective | 4 | _____ | _____ |
| _____ | Social Science Elective | 3 | _____ | _____ |

Christianity & Contexts (8 hours)¹

| | | | | |
|----------|--|---|-------|-------|
| BIBL 104 | Survey of Old & New Testament | 4 | _____ | _____ |
| THEO 104 | Introduction to Theology Survey ² | 4 | _____ | _____ |

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

| Course | | Hrs | Sem | Grade |
|--|--|-----|-------|-------|
| Major Foundational Courses (4-15 hours) | | | | |
| ENGR 270 | Technical Communication ³ | 3 | _____ | _____ |
| MATH 131 | Calculus & Analytical Geometry I ^{3,4} | 4 | _____ | _____ |
| MATH 132 | Calculus & Analytical Geometry II ^{3,4} | 4 | _____ | _____ |
| PHYS 231 | University Physics I ^{3,4} | 4 | _____ | _____ |

MAJOR

| Course | | Hrs | Sem | Grade |
|------------------------|---------------------------------------|-----|-------|-------|
| Core (68 hours) | | | | |
| 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 | Engineering Design Introduction | 3 | _____ | _____ |
| ENGR 481 | Engineering Design I | 3 | _____ | _____ |
| ENGR 482 | Engineering Design II | 3 | _____ | _____ |
| ENGV 205 | Computer Aided Design | 1 | _____ | _____ |
| ENGV 225 | Surveying ⁵ | 2 | _____ | _____ |
| ENGV 320 | Civil Engineering Lab I ⁵ | 2 | _____ | _____ |
| ENGV 325 | Structural Analysis | 3 | _____ | _____ |
| ENGV 345 | Soil Mechanics | 3 | _____ | _____ |
| ENGV 355 | Civil Engineering Lab II ⁵ | 2 | _____ | _____ |
| ENGV 365 | Hydraulic Engineering | 3 | _____ | _____ |
| ENGV 380 | Project & 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 ⁶ | 3 | _____ | _____ |

Technical Elective (3 hours)⁷

| | | | | |
|-------|-------|---|-------|-------|
| _____ | _____ | 3 | _____ | _____ |
|-------|-------|---|-------|-------|

Quantitative Studies (14 hours)

| | | | | |
|----------|---------------------------------------|---|-------|-------|
| ENGR 133 | Calculus with MATLAB | 1 | _____ | _____ |
| ENGR 210 | Prob. & Statistical Methods for Engr. | 3 | _____ | _____ |
| MATH 430 | Multivariable Calculus | 3 | _____ | _____ |
| MATH 432 | Applied Differential Equations | 3 | _____ | _____ |
| PHYS 232 | University Physics II | 4 | _____ | _____ |

Notes

All applicable prerequisites must be met

¹Refer to the list of approved general education electives at www.liberty.edu/gened before enrolling in foundational skills requirements

²Students transferring in 45 or more UG credit hours will have the requirement of RLGN 104 waived; Students transferring in 60 or more UG credit hours will also have the requirement of THEO 104 waived

³Courses may also fulfill select General Education Requirements. Please refer to the list of approved general education electives at www.liberty.edu/gened

⁴Minimum grade of 'C' required

⁵Course offered in Intensive Format

⁶Choose from the following approved Science Courses: BIOL 101, ENVR 215, or ENVR 220

⁷Choose from the following courses: ENGV 415, 440, 455, or 460

Suggested Course Sequence on second page

SUGGESTED COURSE SEQUENCE

FRESHMAN YEAR

| First Semester | | Second Semester | |
|--|----------|---|----------|
| ENGL 101 | 3 | MATH 132 ² | 4 |
| RLGN 104 | 4 | Information Literature Elective ¹ | 3 |
| UNIV 104 | 0-3 | Natural Science Elective ¹ [PHYS 231] ² | 4 |
| Math Elective ¹ [MATH 131] ² | 4 | ENGI 220 | 3 |
| ENGR 105 | 2 | ENGR 115 | <u>2</u> |
| ENGR 133 | <u>1</u> | Total | 16 |
| Total | 14-17 | | |

SOPHOMORE YEAR

| | | | |
|---|----------|-----------------------|----------|
| Communications Elective ¹ [ENGR 270] | 3 | CHEM 115 | 4 |
| ENGR 210 | 3 | ENGR 240 | 3 |
| ENGR 235 | 3 | ENGR 330 | 3 |
| ENGV 205 | 1 | ENGV 225 ³ | 2 |
| MATH 430 | 3 | MATH 432 | <u>3</u> |
| PHYS 232 | <u>4</u> | Total | 15 |
| Total | 17 | | |

JUNIOR YEAR

| | | | |
|---|----------|-----------------------|----------|
| Critical Thinking Elective ¹ | 3 | ENGR 381 | 3 |
| Social Sciences Elective ¹ | 3 | ENGV 355 ³ | 2 |
| ENGR 315 | 3 | ENGV 365 | 3 |
| ENGV 320 ³ | 2 | ENGV 380 | 3 |
| ENGV 325 | 3 | ENGV 390 | 3 |
| ENGV 345 | <u>3</u> | ENGV 395 | <u>3</u> |
| Total | 17 | Total | 17 |

SENIOR YEAR

| | | | |
|-------------------------------|----------|--|----------|
| BIBL 104 | 4 | THEO 104 | 4 |
| ENGR 481 | 3 | Cultural Studies Elective ¹ | 3 |
| ENGV 410 | 3 | Information Literature Elective ¹ | 3 |
| ENGV 420 | 2 | ENGR 482 | 3 |
| ENGV 425 | 3 | ENGV 492 | 0 |
| Science Elective ⁴ | <u>3</u> | Technical Elective ⁵ | <u>3</u> |
| Total | 18 | Total | 16 |

Notes

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²Minimum grade of 'C' required

³Course offered in Intensive Format

⁴Choose from the following approved Science Courses: BIOL 101, ENVR 215, or ENVR 220

⁵Choose from the following courses: ENGV 415, 440, 455, 460