

**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 (46-49 hours)

Course		Hrs	Sem	Grade
<b>Communication &amp; Information Literacy (13 hours)<sup>1</sup></b>				
ENGL 101	Composition & Rhetoric	3	_____	_____
INQR 101	Inquiry 101	1	_____	_____
_____	Communications Elective	3	_____	_____
_____	Information Literacy Elective	3	_____	_____
_____	Information Literacy Elective	3	_____	_____

#### Technological Solutions & Quantitative Reasoning (5-8 hours)<sup>1</sup>

UNIV 101	Foundational Skills	1	_____	_____
MATH _____	Math Elective (MATH 114 or higher)	4	_____	_____
_____	Technology Competency <sup>2</sup>	0-3	_____	_____

#### Critical Thinking (8 hours)<sup>1</sup>

RLGN 105	Intr Bwww/Contemp Moral Issues <sup>3</sup>	2	_____	_____
RSCH201	Research 201	3	_____	_____
_____	Critical Thinking Elective	3	_____	_____

#### Civic & Global Engagement (5 hours)<sup>1</sup>

EVAN 101	Evangelism & Christian Life <sup>3</sup>	2	_____	_____
_____	Cultural Studies Elective	3	_____	_____

#### Social & Scientific Inquiry (7 hours)<sup>1</sup>

_____	Natural Science Elective	4	_____	_____
_____	Social Science Elective	3	_____	_____

#### Christianity & Contexts (8 hours)<sup>1</sup>

BIBL 105	Old Testament Survey	2	_____	_____
BIBL 110	New Testament Survey	2	_____	_____
THEO 201	Theology Survey I <sup>3</sup>	2	_____	_____
THEO 202	Theology Survey II <sup>3</sup>	2	_____	_____

Course		Hrs	Sem	Grade
<b>Major Foundational Courses (4-15 hours)</b>				
ENGR 270	Technical Communication <sup>4</sup>	3	_____	_____
MATH 131	Calculus & Analytical Geometry I <sup>4,5</sup>	4	_____	_____
MATH 132	Calculus & Analytical Geometry II <sup>4,5</sup>	4	_____	_____
PHYS 231	University Physics I <sup>4,5</sup>	4	_____	_____

#### MAJOR

Course		Hrs	Sem	Grade
<b>Core (55 hours)</b>				
CSIS 111	Introduction to Programming	3	_____	_____
ENGI 220	Engineering Economy	3	_____	_____
ENGI 230	Production Systems	3	_____	_____
ENGI 300	Enterprise Forecasting	3	_____	_____
ENGI 305	Data Analysis Methods & Modeling	3	_____	_____
ENGI 330	Facilities Design	3	_____	_____
ENGI 340	Intro. Ops. Res.: Deterministic Models	3	_____	_____
ENGI 350	Intro. Ops. Res.: Probabilistic Models	3	_____	_____
ENGI 360	Engineering Information Systems	3	_____	_____
ENGI 420	Adv. Data Analysis & Machine Learning	3	_____	_____
ENGI 430	Decision Analysis	3	_____	_____
ENGI 450	Human Factors & Ergonomics	3	_____	_____
ENGI 460	Digital Simulation	3	_____	_____
ENGR 102	Introduction to Engineering	1	_____	_____
ENGR 110	Introduction to Engineering Fundamentals	3	_____	_____
ENGR 370	Quality Assurance	3	_____	_____
ENGR 381	Engineering Design Introduction	3	_____	_____
ENGR 481	Engineering Design I	3	_____	_____
ENGR 482	Engineering Design II	3	_____	_____
<b>Technical Electives (9 hours)<sup>6,7</sup></b>				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

#### Quantitative Studies (21 hours)

ENGR 133	Calculus with MATLAB	1	_____	_____
ENGR 210	Prob. & Statistical Methods for Engr.	3	_____	_____
MATH 221	Applied Linear Algebra	3	_____	_____
MATH 231	Calculus & Analytical Geometry III	4	_____	_____
MATH 250	Introduction to Discrete Mathematics	3	_____	_____
MATH 334	Differential Equations	3	_____	_____
PHYS 232	University Physics II	4	_____	_____

#### Notes

All applicable prerequisites must be met

<sup>1</sup>Refer to the list of approved general education electives at [www.liberty.edu/gened](http://www.liberty.edu/gened) before enrolling in foundational skills requirements

<sup>2</sup>All students must pass the Computer Assessment OR complete applicable INFT course; refer to [www.liberty.edu/computerassessment](http://www.liberty.edu/computerassessment) for more information

<sup>3</sup>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

<sup>4</sup>Courses may also fulfill select General Education Requirements. Please refer to the list of approved general education electives at [www.liberty.edu/gened](http://www.liberty.edu/gened)

<sup>5</sup>Minimum grade of "C" is required

<sup>6</sup>Select from the list of Approved [Engineering Technical Elective Courses](#)

<sup>7</sup>ENGR 495 (Directed Research) is strongly recommended

*Suggested Course Sequence on second page*

#### Graduation Requirements

135 Total Hours

2.0 Overall grade point average

33.75 Hours must be upper-level courses (300-400 level)

Grade of 'C' Minimum required for all upper-level courses in the major

25% Of major, including technical electives and quantitative studies, taken through Liberty University

33.75 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

## SUGGESTED COURSE SEQUENCE

### FRESHMAN YEAR

First Semester		Second Semester	
ENGL 101	3	BIBL 105	2
MATH 131 <sup>1</sup>	4	INQR 101	1
RLGN 105	2	Communications Elective <sup>3</sup> [ENGR 270]	3
UNIV 101	1	Mathematics Elective <sup>3</sup> [MATH 132 <sup>1</sup> ]	4
Technology Competency <sup>2</sup>	0-3	Natural Science Elective <sup>3</sup> [PHYS 231 <sup>1</sup> ]	4
ENGR 102	1	ENGI 220	3
ENGR 110	3	CSER	<u>0</u>
ENGR 133	1	Total	17
CSER	<u>0</u>		
Total	15-18		

### SOPHOMORE YEAR

EVAN 101	2	ENGI 230	3
RSCH 201	3	ENGI 360	3
Information Literacy Elective <sup>3</sup>	3	MATH 221	3
CSIS 111	3	MATH 334	3
MATH 231	4	PHYS 232	4
MATH 250	3	CSER	<u>0</u>
CSER	<u>0</u>	Total	16
Total	18		

### JUNIOR YEAR

BIBL 110	2	Critical Thinking Elective <sup>3</sup>	3
THEO 201	2	Social Science Elective <sup>3</sup>	3
Cultural Studies Elective <sup>3</sup>	3	ENGI 305	3
ENGI 330	3	ENGI 350	3
ENGI 340	3	ENGR 370	3
ENGR 210	3	ENGR 381	3
CSER	<u>0</u>	CSER	<u>0</u>
Total	16	Total	18

### SENIOR YEAR

THEO 202	2	Information Literacy Elective <sup>3</sup>	3
ENGI 300	3	ENGI 450	3
ENGI 420	3	ENGI 460	3
ENGI 430	3	ENGR 482	3
ENGR 481	3	Technical Elective <sup>4</sup>	3
Technical Elective <sup>4</sup>	3	Technical Elective <sup>4,5</sup>	3
CSER	<u>0</u>	CSER	<u>0</u>
Total	17	Total	18

#### Notes

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<sup>3</sup>Refer to the list of approved general education electives at [www.liberty.edu/gened](http://www.liberty.edu/gened) before enrolling in foundational skills requirements

<sup>4</sup>Select from the list of Approved [Engineering Technical Elective Courses](#)

<sup>5</sup>ENGR 495 (Directed Research) is strongly recommended