

## **Bachelor of Science in Computer Engineering**

2023-2024 Degree Completion Plan

**Important:** This degree plan is effective for those starting this degree program in fall 2023 through summer 2024. 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/

FOUNDATI	IONAL SKILLS REQUIREMENTS		<u>s)</u>					
Course		Hrs Sem	Grade	Course		Hrs	<u>Sem</u>	Grade
Communica	tion & Information Literacy (13 hou	rs) <sup>1</sup>		Major Foun	dational Courses (4-15 hours)			
ENGL 101	Composition & Rhetoric	3		ENGR 270	Technical Communication <sup>4</sup>	3		
INQR 101	Inquiry 101	1		MATH 131	Calculus & Analytical Geometry I <sup>4,5</sup>	4		
	Communications Elective	3		MATH 132	Calculus & Analytical Geometry II <sup>4,5</sup>	4		
	Information Literacy Elective	3		PHYS 231	University Physics I <sup>4,5</sup>	4		
	Information Literacy Elective	3						
				<b>MAJOR</b>				
Technologic	al Solutions & Quantitative Reasonin	ng (5-8 hours	$(s)^1$		Core (58 hours)			
UNIV 101	Foundational Skills	1		CSIS 111	Introduction to Programming	3		
MATH	Math Elective (MATH 114 or higher)	4		CSIS 112	Advanced Programming	3		
	Technology Competency <sup>2</sup>	0-3	·	CSIS 215	Algorithms & Data Structures	3		
				ENGC 301	Introduction to Embedded Systems	3		
Critical Thir	nking (8 hours) <sup>1</sup>			ENGC 361	Computer Architecture	3		
RLGN 105	Intr Bwvw/Contemp Moral Issues <sup>3</sup>	2	·	ENGC 371	Embedded & Real-Time System Design	3		
RSCH 201	Research 201	3		ENGC 401	Advanced Embedded Systems Design	3		
	Critical Thinking Elective	3	·	ENGC 465	Introduction to Computer Networks	3		
				ENGE 201	Introduction to Logic Design	3		
Civic & Glo	bal Engagement (5 hours) <sup>1</sup>			ENGE 211	Intro. to Electrical & Electronic Circuits	4		
EVAN 101	Evangelism & Christian Life <sup>3</sup>	2		ENGE 212	AC Circuit Analysis	4		
	Cultural Studies Elective	3		ENGE 311	Signals & Systems	3		
				ENGE 321	Electronics	4		
Social & Scientific Inquiry (7 hours) <sup>1</sup>			ENGE 341	Communication Systems	3			
	Natural Science Elective	4	. <u> </u>	ENGI 220	Engineering Economy	3		
	Social Science Elective	3		ENGR 102	Introduction to Engineering	1		
				ENGR 110	Introduction to Engineering Fundamentals	3		
Christianity & Contexts (8 hours) <sup>1</sup>				ENGR 481	Engineering Design I	3		
BIBL 105	Old Testament Survey	2		ENGR 482	Engineering Design II	3		
BIBL 110	New Testament Survey	2						
THEO 201	Theology Survey I <sup>3</sup>	2			Technical Elective Courses (6 hours) <sup>6,7</sup>			
THEO 202	Theology Survey II <sup>3</sup>	2						
					Quantitative Studies Courses (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		

#### **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

#### Notes

All applicable prerequisites must be met

<sup>1</sup>Refer to the list of approved general education electives at <a href="www.liberty.edu/gened">www.liberty.edu/gened</a> before enrolling in foundational skills requirements

<sup>2</sup>All students must pass the Computer Assessment OR complete applicable INFT course; refer to <a href="www.liberty.edu/computerassessment">www.liberty.edu/computerassessment</a> for more information

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 <a href="www.liberty.edu/gened">www.liberty.edu/gened</a>

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

<sup>6</sup>Select from the list of Approved <u>Engineering Technical Elective Courses</u>

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

Suggested Course Sequence on second page

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## 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	01	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> ]	1	4									
ENGR 102	1	ENGI 220	-	3									
ENGR 110	3	CSER		0									
ENGR 133	1	Т	otal	<u>-</u> 17									
CSER	0												
	Total 15-18												
SOPHOMORE YEAR													
RSCH 201	3	CSIS 112		3									
CSIS 111	3	ENGE 201		3									
ENGE 211	4	ENGE 212		4									
MATH 231	4	MATH 221		3									
MATH 250	3	PHYS 232		4									
CSER	0	CSER		0									
	Total 17	Т	otal	17									
JUNIOR YEAR													
EVAN 101	2	THEO 201		2									
ENGC 301	3	Information Literacy Elective <sup>3</sup>		3									
ENGE 311	3	CSIS 215		3									
ENGE 321	4	ENGC 371		3									
ENGR 210	3	ENGE 341		3									
MATH 334	3	Technical Elective <sup>4</sup>		3									
CSER	<u>0</u>	CSER		0									
	Total 18	Т	otal	17									
SENIOR YEAR													
THEO 202	2	BIBL 110		2									
Critical Thinking Elective <sup>3</sup>	3	Cultural Studies Elective <sup>3</sup>		3									
ENGC 361 3		Information Literacy Elective <sup>3</sup>		3									
ENGC 465	3	Social Science Elective <sup>3</sup>		3									
ENGR 481	3	ENGC 401		3									
Technical Elective <sup>4,5</sup>	3	ENGR 482		3									
CSER				_									
	<u>0</u>	CSER		0									

### Notes

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<sup>&</sup>lt;sup>2</sup>All students must pass the Computer Assessment OR complete applicable INFT course; refer to <a href="https://www.liberty.edu/computerassessment">www.liberty.edu/computerassessment</a> for more information

<sup>&</sup>lt;sup>3</sup>Refer to the list of approved general education electives at <a href="https://www.liberty.edu/gened">www.liberty.edu/gened</a> before enrolling in foundational skills requirements <sup>4</sup>Select from the list of Approved <a href="https://email.org/length/email.or

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