# LIBERTY UNIVERSITY

# **Bachelor of Science in Electrical Engineering**

2020-2021 Degree Completion Plan

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/

FOUNDATI	ONAL SKILLS REQUIREMENTS	(46-49	hours	)					
Course		Hrs	Sem	Grade	Course		Hrs	Sem	Grade
Communication & Information Literacy (13 hours) <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 I4,5	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							
					MAJOR				
Technologic	al Solutions & Quantitative Reasonir	ng (5-8	hours	)1		Core (59 hours)			
UNIV 101	Foundational Skills	1			CSIS 111	Introduction to Programming	3		
MATH	Math Elective (MATH 114 or higher)	4			ENGC 361	Computer Architecture	3		
	Technology Competency <sup>2</sup>	0-3			ENGE 201	Introduction to Logic Design	3		
					ENGE 211	Intro. to Electrical & Electronic Circuits	4		
<b>Critical Thin</b>	nking (8 hours) <sup>1</sup>				ENGE 212	AC Circuit Analysis	4		
RLGN 105	Intr Bwvw/Contemp Moral Issues <sup>3</sup>	2			ENGE 311	Signals & Systems	3		
RSCH 201	Research 201	3			ENGE 312	Digital Signal Processing	3		
	Critical Thinking Elective	3			ENGE 321	Electronics	4		
					ENGE 331	Electromagnetic Fields	4		
Civic & Glo	bal Engagement (5 hours) <sup>1</sup>				ENGE 341	Communication Systems	3		
EVAN 101	Evangelism & Christian Life <sup>3</sup>	2			ENGE 411	Control Systems	3		
	Cultural Studies Elective	3			ENGE 421	Advanced Electronics	3		
					ENGI 220	Engineering Economy	3		
Social & Sci	entific Inquiry (7 hours) <sup>1</sup>				ENGR 102	Introduction to Engineering	1		
	Natural Science Elective	4			ENGR 110	Introduction to Engineering Fundamentals	3		
	Social Science Elective	3			ENGR 381	Engineering Design Introduction	3		
					ENGR 481	Engineering Design I	3		
Christianity	& Contexts (8 hours) <sup>1</sup>				ENGR 482	Engineering Design II	3		
BIBL 105	Old Testament Survey	2				6	3		
BIBL 110	New Testament Survey	2							
THEO 201	Theology Survey I <sup>3</sup>	2				Technical Electives (3 hours)7,8			
<b>THEO 202</b>	Theology Survey II <sup>3</sup>	2				、			
							_		
						Quantitative Studies (21 hours)			
					ENGR 133	Calculus with MATLAB	1		
					ENGR 210	Prob. & Statistical Analysis for Engr.	3		
					MATH 221	Applied Linear Algebra	3		
					MATH 231	Calculus & Applied Geometry III	4		
					MATH 250	Introduction to Discrete Mathematics	3		
					MATH 334	Differential Equations	3		
					PHYS 232	University Physics II	4		
					Notes		•		
						rerequisites must be met			
						of approved general education electives at <u>www.lib</u>	erty.ed	lu/gened	before
						ndational skills requirements ist pass the Computer Assessment OR complete appl	icable	INFT co	urse.
Graduation Re	quirements					berty.edu/computerassessment for more information		101100	uise,
133 Total Hours				<sup>3</sup> Students transfe	<sup>3</sup> Students transferring in 45 or more UG credit hours will have the requirements of RLGN				
<b>2.0</b> Overall grade point average				105 & EVAN 101 waived; Students transferring in 60 or more UG credit hours will also					
<b>33.25</b> Hours must be upper-level courses (300-400 level) <b>Grade of 'C'</b> Minimum required for all upper-level courses in the major				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					
<b>25%</b> Of major, including technical electives and quantitative studies, taken				approved general education electives at www.liberty.edu/gened					
through Liberty University				<sup>5</sup> Minimum grade of "C" is required					
33.25 Hours must be completed through Liberty University Grad App Submission of Degree Completion Application must be completed				<sup>6</sup> Choose from: ENGC 465, ENGE 351 or ENGE 431 <sup>7</sup> Select from the list of Approved Engineering Technical Elective Courses					
Gruu	within the last semester of a student's anticipa					rected Research) is strongly recommended			
CSER All requirements must be satisfied before a degree will be awarded			Suggested Course Sequence on second page						

## 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	0
ENGR 133	1	Total	17
CSER	<u>0</u>		
	Total 15-18		

#### SOPHOMORE YEAR

RSCH 201	3	ENGE 201	3
CSIS 111	3	ENGE 212	4
ENGE 211	4	MATH 221	3
MATH 231	4	MATH 334	3
MATH 250	3	PHYS 232	4
CSER	<u>0</u>	CSER	<u>0</u>
	Total 17		Total 17

#### JUNIOR YEAR

BIBL 110	2	THEO 201	2
EVAN 101	2	Information Literacy Elective <sup>3</sup>	3
ENGE 311	3	ENGE 312	3
ENGE 321	4	ENGE 341	3
ENGE 331	4	ENGE 421	3
ENGR 210	3	ENGR 381	3
CSER	<u>0</u>	CSER	<u>0</u>
	Total 18		Total 17

#### SENIOR YEAR

THEO 202	2	Cultural Studies Elective <sup>3</sup>	3
Critical Thinking Elective <sup>3</sup>		Information Literacy Elective <sup>3</sup>	3
ENGC 361	3	Social Science Elective <sup>3</sup>	3
ENGC 465	3	ENGR 482	3
(OR ENGE 351 OR ENGE 431 in Spring)	Technical Elective <sup>4, 5</sup>	3	
ENGE 411	3	CSER	<u>0</u>
ENGR 481	3		Total 15
CSER	<u>0</u>		
Total	17		

#### Notes

<sup>1</sup>Minimum grade of "C" is required

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

<sup>3</sup>Refer to the list of approved general education electives at <u>www.liberty.edu/gened</u> 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