

Bachelor of Science in Mechanical Engineering

2024-2025 Degree Completion Plan

This degree plan is effective for those starting this degree program in fall 2024 through summer 2025. This degree plan will remain in Important: effect for students who do not break enrollment or who do not change degree programs, concentrations or cognates.

GENERAL EDUCATION/

FOUNDAT	IONAL SKILLS REQUIREMENTS	(42-45	<u>hours)</u>					
Course		Hrs	Sem Grade	Course		Hrs	Sem	Grad
Communica	ation & Information Literacy (12 hou	$(rs)^1$		Major Foun	dational Courses (4-15 hours)			
ENGL 101	Composition & Rhetoric	3		ENGR 270	Technical Communication ^{4,5}	3		
	Communications Elective	3		MATH 131	Calculus & Analytical Geometry I4,5	4		
	Information Literacy Elective	3		MATH 132	Calculus & Analytical Geometry II ^{4,5}	4		
	Information Literacy Elective	3		PHYS 231	University Physics I4,5,6	4		
Technologic	cal Solutions & Quantitative Reasoni	ng (5-8	hours) ¹	MAJOR				
UNIV 101	Foundational Skills	1			Core (59 hours)			
MATH		4		CHEM 121	General Chemistry I ^{5,6}	4		
	Technology Competency ²	0-3		ENGI 220	Engineering Economy ⁵	3		
				ENGM 310	Materials Engineering	3		
Critical Thi	inking (5 hours) ¹			ENGM 350	Computer-Aided Engineering	3		
RLGN 105	Intr Bwvw/Contemp Moral Issues ³	2		ENGM 375	Thermal-Fluids Design Lab	2		
	Critical Thinking Elective	3		ENGM 415	Design of Machine Components	3		
				ENGM 445	Materials & Manufacturing Processing	4		
Civic & Glo	obal Engagement (5 hours) ¹			ENGR 110	Intro. to Engineering Fundamentals ⁵	3		
EVAN 101	Evangelism & Christian Life ³	2		ENGR 235	Statics ⁵	3		
	Cultural Studies Elective	3		ENGR 240	Dynamics ⁵	3		
				ENGR 313	Mechatronics	4		
Social & Scientific Inquiry (7 hours) ¹			ENGR 315	Fluid Dynamics	3			
	Natural Science Elective	4		ENGR 320	Thermodynamics	3		
	Social Science Elective	3		ENGR 330	Mechanics of Materials	3		
				ENGR 360	Heat Transfer	3		
Christianity & Contexts (8 hours) ¹			ENGR 385	Thermodynamics II	3			
BIBL 105	Old Testament Survey	2		ENGR 405	Dynamic Systems Modeling	3		
BIBL 110	New Testament Survey	2		ENGR 481	Engineering Design I	3		
THEO 201	Theology Survey I ³	2		ENGR 482	Engineering Design II	3		
THEO 202	Theology Survey II ³	2						
					<u>Technical Electives</u> (12 hours) ^{5,6,7,8}			
						_		
						-		-
						-		
						-		
					Quantitative Studies (14 hours)			
				ENGR 210	Prob. & Statistical Methods for Engr. ⁵	3		
				MATH 231	Calculus & Analytical Geometry III ⁵	4		
				MATH 334	Differential Equations ⁵	3		
				PHYS 232	University Physics II ^{5,6}	4		

Graduation Requirements

131 Total Hours

2.0 Overall grade point average

32.75 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

32.75 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

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

All students must pass the Computer Assessment OR complete applicable INFT course; refer to www.liberty.edu/computerassessment 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

⁴Courses may also fulfill select General Education Requirements. Please refer to the list of approved general education electives at www.liberty.edu/gened

Minimum grade of "C" is required

⁶Lab Science courses require lab

⁷Select from the list of Approved <u>Engineering Technical Elective Courses</u>

8ENGR 495 (Directed Research) is strongly recommended

Suggested Course Sequence on second page

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SUGGESTED COURSE SEQUENCE

FRESHMAN YEAR

BIBL 105	First Semester		Second Semester										
MATH 131¹ 4 Mathematics Elective³ [MATH 132¹] 4 RLGN 105 2 Natural Science Elective³ [PHYS 23¹¹] 4 UNIV 101 1 ENGI 220¹ 3 Technology Competency² 0-3 CSER 0 ENGR 110¹ 3 Total 15-18 Total 15-18 SOPHOMORE VEAR CHEM 121¹ 4 ENGM 310 3 ENGR 235¹ 3 ENGR 210¹ 3 MATH 231¹ 4 ENGR 320 3 CSER 0 ENGR 320 3 CSER 0 ENGR 330 3 CSER 0 ENGR 330 3 CSER 0 ENGR 330 3 THEO 202 2 2 Information Literacy Elective³ 3 ENGR 315 3 ENGR 315 3 ENGM 350 3 ENGR 360 3 ENGM 350 3 ENGR 315 3 ENGM 350	BIBL 105	2	BIBL 110										
RLGN 105	ENGL 101	3	Communications Elective ³ [ENGR 270 ¹]	3								
UNIV 101	MATH 131 ¹	4	Mathematics Elective ³ [MATH 132 ¹]		4								
Technology Competency	RLGN 105	2			4								
Total 101	UNIV 101	1	ENGI 220 ¹		3								
CSER		0-3	CSER		0								
Total 15-18 SOPHOMORE YEAR CHEM 1211	ENGR 110 ¹	3	То	tal	16								
SOPHOMORE YEAR	CSER	<u>0</u>											
CHEM 121 ¹		Total 15-18											
BNGR 2351	SOPHOMORE YEAR												
MATH 231¹ 4 ENGR 240¹ 3 PHYS 232¹ 4 ENGR 320 3 CSER 0 ENGR 330 3 Total 15 MATH 334¹ 3 CSER 0 Total 18 JUNIOR YEAR THEO 201 2 THEO 202 2 Information Literacy Elective³ 3 Critical Thinking Elective³ 3 ENGR 315 3 ENGM 350 3 ENGR 360 3 ENGM 375 2 ENGR 385 3 Technical Elective¹⁴ 3 Technical Elective¹⁴ 3 SENIOR YEAR EVAN 101 2 Information Literacy Elective³ 3 CSER 0 Total 17 Total 16 EVAN 101 2 Information Literacy Elective³ 3 CSER 0 Cultural Studies Elective³ 3 Social Science Elective³ 3 EVAN 101 2 Information Literacy Elective³	CHEM 121 ¹	4	ENGM 310		3								
PHYS 2321	ENGR 235 ¹	3	ENGR 210 ¹		3								
CSER 0 ENGR 330 MATH 334¹ 3 CSER 0 Total 18 JUNIOR YEAR THEO 201 2 THEO 202 2 Information Literacy Elective³ 3 ENGM 350 3 ENGR 315 3 ENGM 350 3 ENGR 360 3 ENGM 375 2 ENGR 385 3 Technical Elective¹⁴ 3 Total 17 7 Total 16 EVAN 101 2 Information Literacy Elective³ 3 Total 17 Total 16 EVAN 101 2 Information Literacy Elective³ 3 Social Science Elective³ 3 Social Science Elective³ 3 ENGM 415 3 ENGR 313 4 ENGR 405 4 ENGR 481 4 ENGR 482 3 Technical Elective¹-4,4,5 4 ENGR 482 3 Technical Elective¹-4,5 3 ENGR 482 3 ENGR 482 3 ENGR 482 3 EN	MATH 231 ¹	4	ENGR 240 ¹		3								
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CSER		<u>0</u>	ENGR 330		3								
Total 18 Total 19 Tot		Total 15	MATH 334 ¹		3								
THEO 201			CSER		0								
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		Total 17											

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