LIBERTY UNIVERSITY

Bachelor of Science in Mechanical 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/ FOUNDATIONAL SKILLS REQUIREMENTS (46-49 hours)

Course		Hrs	Sem	Grade
Communication & Information Literacy (13 hours)[1]				
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)[1]				
UNIV 101	Foundational Skills	1		
MATH ____	Math Elective (MATH 114 or higher)	4		
_____	Technology Competency[2]	0-3		
Critical Thinking (8 hours)[1]				
RLGN 105	Intr Bwvw/Contemp Moral Issues[3]	2		
RSCH 201	Research 201	3		
_____	Critical Thinking Elective	3		
Civic & Global Engagement (5 hours)[1]				
EVAN 101	Evangelism & Christian Life[3]	2		
_____	Cultural Studies Elective	3		
Social & Scientific Inquiry (7 hours)[1]				
_____	Natural Science Elective	4		
_____	Social Science Elective	3		
Christianity & Contexts (8 hours)[1]				
BIBL 105	Old Testament Survey	2		
BIBL 110	New Testament Survey	2		
THEO 201	Theology Survey I[3]	2		
THEO 202	Theology Survey II[3]	2		

Course		Hrs	Sem	Grade
Major Foundational Courses (4-15 hours)				
ENGR 270	Technical Communication[4]	3		
MATH 131	Calculus & Analytical Geometry I[4,5]	4		
MATH 132	Calculus & Analytical Geometry II[4,5]	4		
PHYS 231	University Physics I[4,5]	4		
MAJOR				
	Core (64 hours)			
CHEM 121	General Chemistry I	4		
ENGI 220	Engineering Economy	3		
ENGM 310	Materials Engineering	3		
ENGM 350	Computer-Aided Engineering	3		
ENGM 375	Thermal-Fluids Design Lab	2		
ENGM 415	Design of Machine Components	3		
ENGM 445	Materials & Manufacturing Processing	4		
ENGR 102	Introduction to Engineering	1		
ENGR 110	Introduction to Engineering Fundamentals	3		
ENGR 125	Visualization for Engineers	1		
ENGR 235	Statics	3		
ENGR 240	Dynamics	3		
ENGR 313	Mechatronics	4		
ENGR 315	Fluid Dynamics	3		
ENGR 330	Mechanics of Materials	3		
ENGR 360	Heat Transfer	3		
ENGR 381	Engineering Design Introduction	3		
ENGR 385	Thermodynamics II	3		
ENGR 405	Dynamic Systems Modeling	3		
ENGR 481	Engineering Design I	3		
ENGR 482	Engineering Design II	3		
PHYS 320	Thermodynamics	3		
	Technical Electives (6 hours)[6,7]			
_____	_____	_		
_____	_____	_		
	Quantitative Studies (15 hours)			
ENGR 133	Calculus with MATLAB	1		
ENGR 210	Prob. & Statistical Methods for Engr.	3		
MATH 231	Calculus & Analytical Geometry III	4		
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

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

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

[3]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

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

[5]Minimum grade of "C" is required

[6]Select from the list of Approved Engineering Technical Elective Courses

[7]ENGR 495 (Directed Research) is strongly recommended

Suggested Course Sequence on second page

SUGGESTED COURSE SEQUENCE

FRESHMAN YEAR

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

SOPHOMORE YEAR

BIBL 110	2	RSCH 201	3
CHEM 121	4	ENGM 310	3
ENGR 125	1	ENGR 210	3
ENGR 235	3	ENGR 240	3
MATH 231[1]	4	MATH 334	3
PHYS 232	4	PHYS 320	3
CSER	0	CSER	0
Total	18	Total	18

JUNIOR YEAR

THEO 201	2	THEO 202	2
Information Literacy Elective[3]	3	Critical Thinking Elective[3]	3
ENGR 315	3	ENGM 350	3
ENGR 360	3	ENGM 375	2
ENGR 385	3	ENGR 330	3
Technical Elective[4]	3	ENGR 381	3
CSER	0	CSER	0
Total	17	Total	16

SENIOR YEAR

EVAN 101	2	Information Literacy Elective[3]	3
Cultural Studies Elective[3]	3	Social Science Elective[3]	3
ENGM 415	3	ENGR 313	4
ENGR 405	3	ENGM 445	4
ENGR 481	3	ENGR 482	3
Technical Elective[4, 5]	3	CSER	0
CSER	0	Total	17
Total	17		

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

[4]Select from the list of Approved Engineering Technical Elective Courses

[5]ENGR 495 (Directed Research) is strongly recommended