



Bachelor of Science

Major: Mechanical Engineering

2023-2024 Sample 4-Year Plan

Total Degree Requirements: 130 credits

Student _____ Student ID# _____ Student Phone # _____
 Advisor _____ Minimum GPA 2.00* Minor/Career Interest(s) _____

Students are not limited to this plan; it is meant to be used as a guide for planning purposes in consultation with your advisor. The sample schedule is one possible path to completing your degree within four years. For official program requirements, please refer to the [Undergraduate Catalog](#).

First Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
CHEM 112	General Chemistry I (SGR #6)	p. MATH 114 or higher	3		
CHEM 112L	General Chemistry I Lab (SGR #6)		1		
GE 101	Introduction to Engineering and Technical Professions		1		
MATH 123	Calculus I (SGR #5)	p. Placement or MATH 115 Minimum grade of "C" required.	4		
ME 121	Production and Fabrication Processes		2		
ME 121L	Production and Fabrication Processes Lab	c. ME 121			
SGR #2	Oral Communication		3		
SGR #3	Social Sciences/Diversity		3		
Total Credit Hours			17		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
EM 214	Statics	p. MATH 123 Minimum grade of "C" required.	3		
MATH 125	Calculus II	p. MATH 123 Minimum grade of "C" required.	4		
ME 212	Mechanical Engineering Design Technologies	p. MATH 115 or consent	1		
ME 212L	Mechanical Engineering Design Technologies Lab	c. ME 212	1		
PHYS 207	Fundamentals of Physics I (SGR #6)	p. MATH 123 Minimum grade of "C" required.	3		
PHYS 207L	Fundamentals of Physics I Lab	c. PHYS 207	1		
SGR #1	Written Communication	p. Placement	3		
Total Credit Hours			16		

Second Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
EM 215	Dynamics	p. EM 214 Minimum grade of "C" required.	3		
EM 321	Mechanics of Materials	p. EM 214 Minimum grade of "C" required	3		
MATH 321	Differential Equations	p. MATH 125	3		
ME 241	Engineering Materials	p. MATH 123 and CHEM 112-112L	3		
PHYS 209	Fundamentals of Physics II	p. PHYS 207-207L and MATH 123	3		
PHYS 209L	Fundamentals of Physics II Lab	c. PHYS 209	1		
Total Credit Hours			16		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
ECON 201	Principles of Microeconomics (SGR #3)		3		
ENGL 277	Technical Writing in Engineering	p. ENGL 101 and GE 101 or GE 109 or PHYS 109 or PHYS 119, or consent	3		

Information Subject to Change. This is not a contract.

p. = Course Prerequisite; c. = Course Co-requisite
 Semester: F = Fall, S = Spring, SU = Summer



Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
GE 231	Technology, Society, and Ethics		3		
MATH 331 or MATH 471	Advanced Engineering Math or Numerical Analysis	p. MATH 321 or p. MATH 225	3		
ME 230	Engineering Design Methods	p. EM 214 and ME 121-121L and ME 212-212L	2		
ME 311	Thermodynamics I	p. PHYS 207-207L and EM 215. Minimum grade of "C" required.	3		
Total Credit Hours			17		

Third Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
EE 300	Basic Electrical Engineering I	p. MATH 125 and PHYS 209	2	F	
EE 300L	Basic Electrical Engineering I Lab		1	F	
EM 331	Fluid Mechanics	p. EM 215. Minimum grade of "C" required.	3		
MATH 225	Calculus III	p. MATH 125	4		
ME 312	Thermodynamics II	p. ME 311 and MATH 321. Minimum grade of "C" required.	3		
ME 321	Fundamentals of Machine Design	p. EM 215	3		
Total Credit Hours			16		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
EE 302	Basic Electrical Engineering II	p. EE 300-300L	2	S	
EE 302L	Basic Electrical Engineering II Lab		1	S	
ME 376	Measurements and Instrumentation	p. ENGL 277 and Co-requisites EM 321 and EM 331	2		
ME 415	Heat Transfer	p. ME 311 and EM 331 and MATH 321 or consent	3		
ME 421	Design of Machine Elements	p. EM 321 and ME 321	3		
SGR #4	Arts and Humanities/Diversity		3		
STAT 381	Introduction to Probability and Statistics	p. MATH 125	3		
Total Credit Hours			17		

Fourth Year

Fall

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
ME 323	Vibrations	p. EM 215 and EM 321 and MATH 331 or MATH 471	3		
ME 476	Thermo-fluids Lab	p. ME 376-376L and EM 331 and ME 312 and ME 415	1		
ME 478	Mechanical Systems Design I	p. ME 421 and MATH 331 or MATH 471	2		
ME 490	Seminar		1		
Tech Electives	Choose from list		3		
Tech Electives	Choose from list		3		
Tech Electives	Choose from list		3		
Total Credit Hours			16		

Spring

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
ME 451	Automatic Controls	p. EE 300-300L or consent and MATH 331 or MATH 471	3		
ME 452	Dynamic Systems Lab	p. ME 323	1		
ME 479	Mechanical Systems Design II	p. ME 478	1		
ME 479L	Mechanical Systems Design II Lab		1		



Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
SGR #4	Arts and Humanities/Diversity		3		
Tech Electives	Choose from list		3		
Tech Electives	Choose from list		3		
		Total Credit Hours	15		

Comments/Notes

Students from all academic majors can pursue graduation with Fishback Honors College distinction. View the [Honors program requirements](#).

***Minimum overall GPA of 2.0 (C average) in Mathematics/Statistics courses required.**

***Minimum overall GPA of 2.0 (C average) in all ME-prefix courses required.**