

BS in Mechanical Engineering

Program Codes:

20FQ0133BS

Degree Requirements

To earn a Bachelor of Science in Mechanical Engineering degree from UIC, students need to complete university, college, and department degree requirements. The Department of Mechanical and Industrial Engineering degree requirements are outlined below. Students should consult the *College of Engineering* section for additional degree requirements and college academic policies.

Summary of Requirements

Nonengineering and General Education Requirements	53
Required in the College of Engineering	66
Technical Electives	6
Electives outside the Major Rubric	3
Total Hours	128

Nonengineering and General Education Requirements

Required Courses

ENGL 160	Academic Writing I: Writing in Academic and Public Contexts	3
ENGL 161	Academic Writing II: Writing for Inquiry and Research	3
	Exploring World Cultures course ^a	3
	Understanding the Creative Arts course ^a	3
	Understanding the Past course ^a	3
	Understanding the Individual and Society course ^a	3
	Understanding U.S. Society course ^a	3
MATH 180	Calculus I ^b	4
MATH 181	Calculus II ^b	4
MATH 210	Calculus III ^b	3
MATH 220	Introduction to Differential Equations	3
CHEM 122	General Chemistry I Lecture ^c	4
CHEM 123	General Chemistry Laboratory I ^{b,c}	1
PHYS 141	General Physics I (Mechanics)	4
PHYS 142	General Physics II (Electricity and Magnetism) ^b	4
PHYS 240	Fundamentals of Modern Quantum Theory	3
or MATH 310	Applied Linear Algebra	
STAT 361	Elements of Statistical Methods	2
Total Hours		53

^a Students should consult the General Education (<http://catalog.uic.edu/ucat/degree-programs/general-education>) section of the catalog for a list of approved courses in this category.

^b This course is approved for the Analyzing the Natural World General Education category.

^c General Education credit is given for successful completion of both CHEM 122 and CHEM 123.

Required in the College of Engineering

Required Courses

ENGR 100	Engineering Orientation ^a	1
CME 201	Statics	3
CME 203	Strength of Materials	3
CME/ME 261	Materials for Manufacturing	2
CS 109	C/C ++ Programming for Engineers with MatLab	3
ECE 210	Electrical Circuit Analysis	3
IE 201	Financial Engineering	3
ME 205	Introduction to Thermodynamics	3
ME 210	Engineering Dynamics	3
ME 211	Fluid Mechanics I	4
ME 250	Introduction to Engineering Design and Graphics	3
ME 308	Mechanical Vibrations	3
ME 312	Dynamic Systems and Control	3
ME 320	Mechanisms and Dynamics of Machinery	3
ME 321	Heat Transfer	4
ME 325	Intermediate Thermodynamics	3
ME 341	Experimental Methods in Mechanical Engineering	3
ME 347	Introduction to Computer-Aided Design	3
ME 370	Mechanical Engineering Design	3
ME 380	Manufacturing Process Principles	3
ME 396	Senior Design I ^b	3
ME 397	Senior Design II	2
ME 428	Numerical Methods in Mechanical Engineering	3
ME 499	Professional Development Seminar	0
Total Hours		66

^a ENGR 100 is a one-semester-hour course, but the hour does not count toward the total hours required for graduation.

^b ME 445 may be used as a substitute for ME 396; ME 444 is a prerequisite for ME 445.

Technical Electives

Courses

Select 6 hours from the following:	6
ME 392	Undergraduate Research
IE 342	Probability and Statistics for Engineers
ECE 458	Electromechanical Energy Conversion
CME 434	Finite Element Analysis I
Any 400-level ME course not required above	
Total Hours	6

Electives Outside the Major Rubric

Electives

Electives outside the ME Rubric	3
Total Hours	3

Sample Course Schedule

Course	Title	Hours
Freshman Year		
First Semester		
MATH 180	Calculus I	4
CHEM 122	General Chemistry I Lecture	4
CHEM 123	General Chemistry Laboratory I	1
ENGL 160	Academic Writing I: Writing in Academic and Public Contexts	3
General Education Core course		3
ENGR 100	Engineering Orientation ^a	1
Hours		15
Second Semester		
MATH 181	Calculus II	4
PHYS 141	General Physics I (Mechanics)	4
ENGL 161	Academic Writing II: Writing for Inquiry and Research	3
ME 250	Introduction to Engineering Design and Graphics	3
CS 109	C/C ++ Programming for Engineers with MatLab	3
Hours		17
Sophomore Year		
First Semester		
MATH 210	Calculus III	3
PHYS 142	General Physics II (Electricity and Magnetism)	4
IE 201	Financial Engineering	3
CME 201	Statics	3
CME 261	Materials for Manufacturing	2
Hours		15
Second Semester		
MATH 220	Introduction to Differential Equations	3
PHYS 240 or MATH 310	Fundamentals of Modern Quantum Theory or Applied Linear Algebra	3
CME 203	Strength of Materials	3
ME 205	Introduction to Thermodynamics	3
Elective outside Major Rubric		3
Hours		15
Junior Year		
First Semester		
ECE 210	Electrical Circuit Analysis	3
ME 210	Engineering Dynamics	3
ME 211	Fluid Mechanics I	4
ME 325	Intermediate Thermodynamics	3
STAT 361	Elements of Statistical Methods	2
General Education Core course		3
Hours		18
Second Semester		
ME 308	Mechanical Vibrations	3

ME 320	Mechanisms and Dynamics of Machinery	3
ME 321	Heat Transfer	4
ME 347	Introduction to Computer-Aided Design	3
General Education Core course		3
Hours		16
Senior Year		
First Semester		
ME 312	Dynamic Systems and Control	3
ME 380	Manufacturing Process Principles	3
ME 428	Numerical Methods in Mechanical Engineering	3
ME 370	Mechanical Engineering Design	3
ME 396	Senior Design I	3
General Education Core course		3
Hours		18
Second Semester		
ME 341	Experimental Methods in Mechanical Engineering	3
ME 397	Senior Design II	2
ME 499	Professional Development Seminar	0
General Education Core course		3
Senior Technical Electives		3
Senior Technical Elective		3
Hours		14
Total Hours		128

^a ENGR 100 is one-semester-hour course, but the hour does not count toward the total hours required for graduation.