

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.

Code	Title	Hours
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

Code	Title	Hours
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 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

Code	Title	Hours
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	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 fulfills the Senior Design requirements (ME 396 and ME 397); ME 444 is a prerequisite for ME 445.

Technical Electives

Code	Title	Hours
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

Code	Title	Hours
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	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.