

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		51
Required in the College of Engineering		62
Technical Electives		12
Electives outside the Required 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	Matter and Energy ^c	3
CHEM 123	Foundations of Chemical Inquiry I ^{b,c}	2
PHYS 141	General Physics I (Mechanics)	4
PHYS 142	General Physics II (Electricity and Magnetism) ^b	4
MATH 218	Applied Linear Algebra	3
Total Hours		51

^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 Success Seminar for Freshmen ^a	1
or ENGR 101	Engineering Success Seminar for Transfer Students	
CME 201	Statics	3
CME 203	Strength of Materials	3
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 312	Dynamic Systems and Control	3
ME 320	Mechanisms and Dynamics of Machinery	3
ME 321	Heat Transfer	4
ME 328	Numerical Methods in Mechanical Engineering	3
ME 341	Experimental Methods in Mechanical Engineering	3
IE 342	Probability and Statistics for Engineers	3
ME 347	Engineering Design and Graphics with Computer-Aided Design and Simulation	3
ME 370	Mechanical Engineering Design	3
ME 380	Materials and Manufacturing Process Principles	3
ME 396	Senior Design I ^b	3
ME 397	Senior Design II ^b	3
ME 499	Professional Development Seminar	0
Total Hours		62

^a ENGR 100 and ENGR 101 are one-semester-hour courses, but the hour does not count toward the total hours required for graduation.

^b The ME 444 and ME 445 year-long course sequence satisfies the capstone requirement for ME 396 and ME 397.

Technical Electives

Code	Title	Hours
Courses		
Select four courses from the following (a maximum of two courses allowed outside of ME):		12
ME 308	Mechanical Vibrations	
ME 325	Intermediate Thermodynamics	
ME 348	Artificial Intelligence and Data Mining for Engineering Applications	

ME 392	Undergraduate Research	
ECE 458	Electromechanical Energy Conversion	
CME 434	Finite Element Analysis I	
IE 411	Mechatronics I	
IE 412	Dynamic Systems Analysis I	
IE 441	Ergonomics and Human Factors	
IE 442	Design and Analysis of Experiments in Engineering	
IE 446	Advanced Quality Control and Reliability	
IE 481	Additive Manufacturing Process	
IE 494	Special Topics in Industrial Engineering	
Or any 400-level ME course not required above		
Total Hours		12

Electives Outside the Required Major Rubric

Code	Title	Hours
Electives		
Electives outside the required ME Rubric courses listed above ^a		3
Total Hours		3

a *The outside elective may be any course that is not lower than, or equivalent to, a course required to complete the degree. Additional ME courses, non-ME courses, courses from other majors, and extra tech electives are allowed. For clarification, students should discuss course selection with their faculty advisor.*

Sample Course Schedule

Course	Title	Hours
Freshman Year		
First Semester		
ENGR 100	Engineering Success Seminar for Freshmen ^a	1
ENGL 160	Academic Writing I: Writing in Academic and Public Contexts	3
MATH 180	Calculus I	4
CHEM 122	Matter and Energy	3
CHEM 123	Foundations of Chemical Inquiry I	2
ME 250	Introduction to Engineering Design and Graphics	3
General Education Core course		3
Hours		18
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
CS 109	Programming for Engineers with MatLab	3
General Education Core Course		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
ECE 210	Electrical Circuit Analysis	3
Hours		16
Second Semester		
MATH 218	Applied Linear Algebra	3

MATH 220	Introduction to Differential Equations	3
CME 203	Strength of Materials	3
ME 205	Introduction to Thermodynamics	3
ME 210	Engineering Dynamics	3
Hours		15

Junior Year

First Semester

ME 211	Fluid Mechanics I	4
ME 320	Mechanisms and Dynamics of Machinery	3
ME 347	Engineering Design and Graphics with Computer-Aided Design and Simulation	3
ME 380	Materials and Manufacturing Process Principles	3
General Education Core course		3
Hours		16

Second Semester

ME 321	Heat Transfer	4
ME 328	Numerical Methods in Mechanical Engineering	3
ME 370	Mechanical Engineering Design	3
Technical Elective		3
General Education Core course		3
Hours		16

Senior Year

First Semester

ME 312	Dynamic Systems and Control	3
ME 396	Senior Design I ^b	3
IE 342	Probability and Statistics for Engineers	3
Elective Outside the Required Major Rubric		3
Technical Elective		3
Hours		15

Second Semester

ME 341	Experimental Methods in Mechanical Engineering	3
ME 397	Senior Design II ^b	3
ME 499	Professional Development Seminar ^c	0
General Education Core course		3
Technical Elective		3
Technical Elective		3
Hours		15
Total Hours		128

a *ENGR 100 is one-semester-hour course, but the hour does not count toward the total hours required for graduation. Students who transfer into the College of Engineering will take ENGR 101 within the first semester after enrolling.*

b *ME 396 is only offered fall semester. ME 397 is only offered spring semester.*

c *ME 499 must be taken final semester.*