

Mechanical Engineering, BSME

To obtain a Bachelor of Science degree in Mechanical Engineering, students are required to complete the following courses:

Code	Title	Semester Hours
Freshman Composition		3-6
EH 101	COLLEGE WRITING I	
EH 102	COLLEGE WRITING II	
Humanities and Fine Arts		9
Fine Art: Choose one		3
ARH 100	ARH SURV:ANCIENT-MEDIEVAL	
ARH 101	ARH SURV:RENAISSANCE-MODERN	
ARH 103	ARH SUR: WORLD ART	
ARS 160	DRAWING: FOUNDATIONS	
TH 122	THEATRE APPRECIATION	
MU 100	INTRO TO MUSIC LITERATURE	
Literature: Choose one or two ¹		3-6
EH 207	READINGS LITERATURE/CULTURE I	
EH 208	READINGS LITERATURE/CULTURE 2	
EH 242	MYTHOLOGY	
Humanities: Choose one		3
PHL 101	INTRODUCTION TO PHILOSOPHY	
PHL 102	INTRO TO ETHICS	
PHL 103	INTRODUCTION TO LOGIC	
PHL 150	TECH, SCIENCE & HUMAN VALUES	
Any 100 or 200 level Foreign Language ³		
WGS 200	INTRO WOMEN'S & GENDER STUDIES	
Mathematics and Natural Sciences		12
Mathematics		4
MA 171	CALCULUS A ²	
Natural Sciences		8
CH 121 & CH 125	GENERAL CHEMISTRY I and GENERAL CHEMISTRY LAB I	
PH 111 & PH 114	GEN PHYSICS W/CALCULUS I and GENERAL PHYSICS LAB I	
History and Social and Behavioral Sciences		9
History: Choose one or two ¹		3-6
HY 103	WORLD HISTORY TO 1500	
HY 104	WORLD HISTORY SINCE 1500	
HY 221	UNITED STATES TO 1877	
HY 222	UNITED STATES SINCE 1877	
Social and Behavioral Science: Choose one or two		3-6
PY 101	GENERAL PSYCHOLOGY I	
SOC 100	INTRO TO SOCIOLOGY	
SOC 102	ANALYSIS OF SOCIAL PROBLEMS	
SOC 105		
SOC 206	MARRIAGE AND FAMILY	
PSC 101	INTRO TO AMERICAN GOVERNMENT	
PSC 102	INTRO TO COMPARATIVE POLITICS	
ESS 105	WORLD REGIONAL GEOGRAPHY	
ESS 110	PRINCIPLES OF HUMAN GEOGRAPHY	

ECN 142	PRINC OF MACROECONOMICS	
ECN 143	PRINC OF MICROECONOMICS	
GS 200	GLOBAL SYSTEMS AND CULTURES	
Code	Title	Semester Hours
Additional Mathematics and Science		
MA 172	CALCULUS B	4
MA 201	CALCULUS C	4
MA 238	APPL DIFFERENTIAL EQUATIONS	3
MA 244	INTRO TO LINEAR ALGEBRA	3
PH 112	GEN PHYSICS W/CALC II	3
PH 115	GENERAL PHYSICS LAB II	1
Select one of the following electives:		3-4
BYS 119	PRINCIPLES OF BIOLOGY	
CH 123	GENERAL CHEMISTRY II	
PH 113	GEN PHYSICS W/CALC III	
Any 300 or 400 level Mathematics		
Engineering		
FYE 101	CHARGER SUCCESS	1
ENG 101	INTRO COMPUTING ENGINEERS	3
MAE 299	MAE MENTORING I	0
MAE 399	MAE MENTORING II	0
Mechanical Engineering		
MAE 211	INTRO COMPUTATIONAL TOOLS	2
EE 213	ELECTRICAL CIRCUIT ANALYSIS I	3
MAE 271	STATICS	3
MAE 272	DYNAMICS	3
MAE 284	NUMERICAL METHODS	3
MAE 310	FLUID MECHANICS I	3
MAE 311	PRIN MEASUREMENT & INSTRUMEN	3
ISE 321	ENGINEERING ECONOMY	3
MAE 341	THERMODYNAMICS I	3
MAE 342	THERMODYNAMICS II	3
MAE 364	KINEMATICS/DYNAM MACHINE	3
MAE 370 & MAE 375	MECHANICS OF MATERIALS and MECHANICS OF MATERIALS LAB	4
MAE 378	MATERIALS & MFG PROCESS	3
MAE 450	INTRO TO HEAT & MASS TRANSFER	3
MAE 455	DESIGN OF THERMAL SYSTEMS	3
MAE 466	MECH & DSGN MACH ELEMENT	3
MAE 488	ANALY ENGINEERING SYSTEM	3
MAE 489	COMPUTER AIDED ENGR	3
MAE 490	SENIOR DESIGN I	3
MAE 491	SENIOR DESIGN II	3
Mechanical Engineering Technical Electives		
Select 6 semester hours from the MAE Approved Technical Electives List		6
ME students may not take both MA 385 AND ISE 390 for credit. ME students may not take MAE 330/331 for credit.		
Total Semester Hours		128

¹ Students must take one literature and one history course. Students must also take either a second literature or history course to complete a sequence (EH 207 + EH 208, EH 209 + EH 210, HY 103 + HY 104, or HY 221 + HY 222).

² Based on Math placement, prerequisite (MA 112 and/or MA 113) Mathematics courses may be required.

³ For choices see the World Languages and Cultures department.

Suggested Schedule for Full-Time Students

Year 1

Fall		Semester Hours
MA 171	CALCULUS A	4
CH 121 & CH 125	GENERAL CHEMISTRY I and GENERAL CHEMISTRY LAB I	4
EH 101	COLLEGE WRITING I	3
ENG 101	INTRO COMPUTING ENGINEERS	3
HSBS/HFA		3

Term Semester Hours: 17

Spring

MA 172	CALCULUS B	4
PH 111 & PH 114	GEN PHYSICS W/CALCULUS I and GENERAL PHYSICS LAB I	4
FYE 101	CHARGER SUCCESS	1
EH 102	COLLEGE WRITING II	3
HSBS/HFA		3

Term Semester Hours: 15

Year 2

Fall		
MA 201	CALCULUS C	4
PH 112 & PH 115	GEN PHYSICS W/CALC II and GENERAL PHYSICS LAB II	4
MA 244	INTRO TO LINEAR ALGEBRA	3
MAE 211	INTRO COMPUTATIONAL TOOLS	2
MAE 271	STATICS	3
MAE 299	MAE MENTORING I	0

Term Semester Hours: 16

Spring

MA 238	APPL DIFFERENTIAL EQUATIONS	3
MAE 272	DYNAMICS	3
MAE 284	NUMERICAL METHODS	3
ISE 321	ENGINEERING ECONOMY	3
HSBS/HFA		3
Science Elective		3

Term Semester Hours: 18

Year 3

Fall		
MAE 341	THERMODYNAMICS I	3
MAE 310	FLUID MECHANICS I	3
MAE 370 & MAE 375	MECHANICS OF MATERIALS and MECHANICS OF MATERIALS LAB	4
EE 213	ELECTRICAL CIRCUIT ANALYSIS I	3
MAE 399	MAE MENTORING II	0
HSBS/HFA		3

Term Semester Hours: 16

Spring

MAE 311	PRIN MEASUREMENT INSTRUMEN	3
MAE 342	THERMODYNAMICS II	3

MAE 364	KINEMATICS/DYNAM MACHINE	3
MAE 378	MATERIALS MFG PROCESS	3
HSBS/HFA		3
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	Term Semester Hours:	15
Year 4		
Fall		
MAE 450	INTRO TO HEAT & MASS TRANSFER	4
& MAE 451	and HEAT & MASS TRANSFER LAB	
MAE 466	MECH DSGN MACH ELEMENT	3
MAE 489	COMPUTER AIDED ENGR	3
MAE 490	SENIOR DESIGN I	3
Technical Elective		3
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	Term Semester Hours:	16
Spring		
MAE 455	DESIGN OF THERMAL SYSTEMS	3
MAE 488	ANALY ENGINEERING SYSTEM	3
MAE 491	SENIOR DESIGN II	3
Technical Elective		3
HSBS/HFA		3
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	Term Semester Hours:	15
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	Total Semester Hours:	128