B.S. in Mechanical Engineering

Four-Year Plan

Catalog Year 2014-2015

Below is the *advised sequence* of courses for this degree program.
The official degree requirements can be found in the University General Catalog.

Course Number and Title	Units	Prerequisites
1ST SEMESTER		
MATH 122A/B or MATH 125 Calculus I with Applications	5/3	Appropriate Math Placement
CHEM 151 General Chemistry I	4	
ENGL 101 First-Year Composition	3	
ENGR 102 Introduction to Engineering or ENGR 102A and 102B	3	Concurrent enrollment or completion of MATH 122B or MATH 125
Tier I General Education	3	
2ND SEMESTER		
MATH 129 Calculus II	3	MATH 122B or 125 with C or better
AME 105 Introduction to MATLAB I	1	MATH 122A/B, MATH 125
ECE 175 Computer Programming for Engineering Applications	3	Concurrent enrollment or completion of MATH122B or MATH 125
PHYS 141 Introductory Mechanics	4	MATH 122B or MATH 125; Concurrent enrollment in MATH 129
ENGL 102 First-Year Composition	3	ENGL 101
Tier I General Education	3	
3RD SEMESTER		
CE 214 Statics	3	PHYS 141; MATH 129
MATH 223 Vector Calculus	4	MATH 129 with C or better
PHYS 241 Introductory Electricity and Magnetism	4	PHYS 141
ABE 221 Introduction to Computer Aided Design	3	
Tier I General Education	3	
4TH SEMESTER		
AME 230 Thermodynamics	3	MATH 223
AME 250 Dynamics	3	CE 214; Concurrent enrollment MATH 254
MATH 254 Intro to Ordinary Differential Equations	3	MATH 129 with C or better
ECE 207 Elements of Electrical Engineering	3	PHYS 241; Completion or concurrent enrollment in MATH 254
AME 205 Introduction to MATLAB II	1	AME 105
Tier I General Education	3	

Course Number and Title	Units	Prerequisites
5TH SEMESTER		
AME 301 Engineering Analysis	3	AME 250, AME 331, or Concurrent enrollment AME 320
AME 324A Mechanical Behavior of Engr. Materials or CE 215 Mechanics of Solids	3	CE 214
AME 331 Introduction to Fluid Mechanics	3	AME 230; AME 250; MATH 254
AME 352 Dynamics of Machines	3	
Tier II General Education	3	
6TH SEMESTER		
AME 324B Engineering Component Design	3	AME 324A
AME 300 Instrumentation Laboratory	3	AME 230; ECE 207; Completion or concurrent enrollment AME 331
AME 302 Numerical Methods	3	AME 301; MATH 254
MSE 331R Fundamentals of Materials for Engineers	3	
AME 324L Mechanics of Materials Laboratory	1	Completion or concurrent enrollment in AME 324A and MSE 331R
Tier II General Education	3	
7TH SEMESTER		
ENGR 498A Cross-disciplinary Design	3	
AME 432 Heat Transfer	3	
AME 495S Senior Colloquium	1	Adv. Standing; Senior status
AME 400 Senior Mechanical Laboratory	2	
AME 413A Mechanical Engineering Design Lab I	1	Adv. Standing
Technical Elective	3	
Technical Elective	3	
8TH SEMESTER		
ENGR 498B Cross-disciplinary Design	3	
AME 455 Control System Design	3	AME 300; AME 301
Technical Elective	3	
Technical Elective	3	
Technical Elective	3	

*Tier I and II General Education Courses must meet University general education requirements. One course must be recognized by the university as meeting the Diversity Requirement.