

Typical 4-year Plan

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING
(Accredited by the Engineering Accreditation Commission of ABET)

First Semester		Units	Second Semester		Units
FRESHMAN YEAR					
ENGR 102A+B	Introduction to Engineering	1+2	MATH 129	Calculus II	3
MATH 125¹	Calculus I (see note below)	3	ECE 175	Computer Prog for Engr. Appl.	3
	OR {MATH 122A (1) + MATH 122B (4)}		AME 105	Intro. To MATLAB I	1
CHEM 151	General Chemistry I	4	ENGL 102	First-Year Composition	3
ENGL 101	First-Year Composition	3	PHYS 141	Introductory Mechanics	4
XXXX ²	General Education	3	XXXX ²	General Education	3
<i>Total</i>		16	<i>Total</i>		17
SOPHOMORE YEAR					
MATH 223	Vector Calculus	4	MATH 254	Introduction to Ordinary Differential Equations	3
PHYS 241	Introductory Electricity and Magnetism	4	ECE 207³	Elements of Electrical Engineering	3
ABE 221/CE210	Introduction to CAD/Engr. Graphics	3	AME 250	Dynamics	3
CE 214	Statics	3	AME 230	Thermodynamics	3
AME 205	Introduction to MATLAB II	1	XXXX ²	General Education	3
			XXXX ²	General Education	3
<i>Total</i>		15	<i>Total</i>		18
JUNIOR YEAR					
AME 301	Engineering Analysis	3	AME 300	Instrumentation Laboratory	3
AME 324A	Mechanical Behavior Engineering Materials	3	AME 302	Numerical Methods	3
OR CE 215	Mechanics of Solids		AME 324B	Engineering Component Design	3
AME 331	Principles & Applications of Fluid Mechanics	3	MSE 331R	Fundamentals of Materials for Engineers	3
AME 352	Dynamics of Machines	3	AME324L	Mechanics of Materials Laboratory	1
AME 313	Aero/Mech Engineering Laboratory	1	XXXX ²	General Education	3
XXXX ²	General Education	3			
<i>Total</i>		16	<i>Total</i>		16
SENIOR YEAR					
ENGR 498A ^F	Cross-Disciplinary Design	3	ENGR 498B ^S	Cross-Disciplinary Design	3
AME 400	Senior Mechanical Laboratory	2	AME 455	Control System Design	3
AME 495S ^F	Colloquium	1	AME 4XX ⁴	Technical Elective [§]	3
AME 432 ^F	Heat Transfer	3	AME 4XX ⁴	Technical Elective [§]	3
Tech Elective ⁴	Technical Elective	3	AME 4XX ⁴	Technical Elective [§]	3
Tech Elective ⁴	Technical Elective	3			
<i>Total</i>		15	<i>Total</i>		15

Courses in **bold**, when taken at the UA, are used to calculate your Advanced Standing (AS) GPA. Minimum AS GPA of 2.500 and least 12 units of UA coursework in bold needed to be eligible for AS (required to enroll in 300 and 400 level coursework)

1. MATH122A/B is a 5-unit version of MATH125. Enrollment in MATH 122A/B or 125 is dependent on MATH placement exam scores.

2. Courses must meet University general education requirements including the Diversity requirement. Consult your advisement report for more details.

3. Students may also take ECE 220 (5 units)

4.15 units of approved technical elective coursework are required. See list of approved technical elective courses under "Resources and Tools" at <http://ame.arizona.edu/ame-programs>. The 15 unit technical elective total must include 9 units of 400-level coursework with the AME prefix, and at least one course that is designated math intensive (MI) from the approved list of technical electives.

Courses with "F" and "S" superscripts denote courses taught only in the fall- and spring- semesters respectively.