

B.S. IN AEROSPACE ENGINEERING

CATALOG YEAR 2016-2017

Below is the *advised sequence* of courses for this degree program and prerequisites as of 2/10/16. The official degree requirements and prerequisites can be found in the University General Catalog and the prerequisites are subject to change.

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 OR CHEM 105A/ 106A	4	
ENGL 101 OR 107 OR 109H First-Year Composition	3	
ENGR 102A/B Introduction to Engineering OR ENGR 102	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	Concurrent enrollment or completion of MATH 122B or MATH 125
PHYS 141 Introductory Mechanics OR PHYS 161H	4	MATH 122B or MATH 125; Concurrent enrollment or completion of MATH 129
ENGL 102 OR 108 OR 109H First-Year Composition	3	ENGL 101, ENGL 107
ECE 175 Computer Programming for Engineering Applications	3	Concurrent enrollment or completion of MATH 122B or MATH 125
Tier I General Education	3	
3RD SEMESTER		
CE 214 Statics	3	PHYS 141 or PHYS 161H; MATH 129
MATH 223 Vector Calculus	4	MATH 129 with C or better
PHYS 241 Introductory Electricity and Magnetism OR PHYS 261H	4	PHYS 141 or PHYS 161H; MATH 129; MATH 223 is recommended not required
AME 205 Introduction to MATLAB II	1	AME 105
ABE 221 Introduction to CAD OR CE 210 Engineering Graphics	3	
Tier I General Education	3	
4TH SEMESTER		
AME 230 Thermodynamics	3	MATH 223
AME 250 Dynamics	3	CE 214; Concurrent enrollment or Completion of MATH 254
MATH 254 Intro to Ordinary Differential Equations	3	MATH 129 or 223 with C or better
AME 220 Introduction to Aerospace Engineering	3	MATH 223; PHYS 141; Concurrent enrollment or Completion of MATH 254
Tier I General Education	3	

COURSE NUMBER AND TITLE	UNITS
CURRENT PREREQUISITES FOR UPPER DIVISION COURSES CAN BE FOUND IN THE UA GENERAL CATALOG	
ADVANCED STANDING IS REQUIRED FOR 3XX AND 4XX COURSES (SEE ADVISOR FOR REQUIREMENTS)	
5TH SEMESTER	
AME 320 Aerodynamics	3
AME 324A Mechanical Behavior of Engineering Materials	3
AME 301 Engineering Analysis	3
AME 300 Instrumentation Laboratory	3
MSE 331R Fundamentals of Materials for Engineers	3
AME 324L Mechanics of Materials Laboratory	1
6TH SEMESTER	
AME 324C Aerospace Structures OR AME 324B Engineering Component Design	3
AME 321 Aircraft Performance	3
AME 323 Gasdynamics	3
AME 302 Numerical Methods	3
AME 313 Aerospace/Mechanical Engineering Laboratory	1
Tier II General Education	3
7TH SEMESTER	
AME 420 Aerospace Conceptual Design	3
AME 425 Aerospace Propulsion	3
AME 427 Stability and Control of Aerospace Vehicles	3
AME 457 Orbital Mechanics and Space Flight	3
AME 495S Senior Colloquium	1
Technical Elective	3
8TH SEMESTER	
AME 422 Aerospace Engineering Design (Offered in Spring 2016)	3
AME 401 Senior Aerospace Laboratory	2
AME 463 Finite Element Analysis with ANSYS OR AME 431 Numerical Methods in Fluid Mechanics and Heat Transfer	3
Technical Elective	3
Tier II General Education	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.