

2014 - 2015 Major Map
Aerospace Engineering (Autonomous Vehicle Systems), BSE

Ira A. Fulton Schools of Engineering
Tempe campus
ESAEAVSBSE

Term 1	0 - 16 Credit Hours	Critical course signified by	Hours	Minimum Grade	Notes	
		🚩	CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II (SQ)	4	C	<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses. ASU Math Placement Exam score determines placement in Mathematics course. ASU 101 or College specific equivalent First Year Seminar required of all freshman students. ASU 101-MAE and FSE 100 required for freshmen and should be completed first semester. Non-freshmen see Advisor for petitioning replacement electives. If ENG 105 taken, a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
		🚩	ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition	3	C	
		🚩	MAT 265: Calculus for Engineers I (MA)	3	C	
			ASU 101-AEE: The ASU Experience OR ASU 101-MAE: The ASU Experience	1		
			FSE 100: Introduction to Engineering	2	C	
			Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C)	3		
		🚩	Minimum 2.00 GPA ASU Cumulative.			
			Term hours subtotal:	16		

Mesa Community College	
Course	Hours
CHM 152 and CHM 152LL	4
ENG 101 or ENG 102 OR ENG 107 or ENG 108	3
MAT 221 or MAT 220	4 5
ECE 102 and ECE 103	2 2
General Studies (HU-C OR HU-G OR HU-H)	3

*** ECE 102 and ECE 103 satisfy both
ASU 101 and FSE 100

Term 2	17 - 31 Credit Hours	Critical course signified by	Hours	Minimum Grade	Notes
		🚩	ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition	3	C
		🚩	MAT 242: Elementary Linear Algebra	2	C
		🚩	MAT 266: Calculus for Engineers II (MA)	3	C
		🚩	PHY 121: University Physics I: Mechanics (SQ)	3	C
		🚩	PHY 122: University Physics Laboratory I (SQ)	1	C
			Social and Behavioral Sciences (SB) AND Global Awareness (G)	3	
		🚩	Minimum 2.00 GPA ASU Cumulative.		
			Complete ENG 101 OR ENG 105 OR ENG 107 course(s).		
			Term hours subtotal:	15	

Mesa Community College	
Course	Hours
ENG 101 or ENG 102 OR ENG 107 or ENG 108	3
MAT 225	3
MAT 231 or MAT 230	4 5
PHY 121	4
General Studies (SB-C OR SB-G OR SB-H)	3

Term 3	32 - 46 Credit Hours	Critical course signified by	Hours	Minimum Grade	Notes
		🚩	MAE 212: Engineering Mechanics	4	C
		🚩	MAT 275: Modern Differential Equations (MA)	3	C
		🚩	PHY 131: University Physics II: Electricity and Magnetism (SQ)	3	C
		🚩	PHY 132: University Physics Laboratory II (SQ)	1	C
			MAE 215: Introduction to Programming in MATLAB	1	C
			MAT 267: Calculus for Engineers III (MA)	3	C
		🚩	Complete MAT 265 AND MAT 266 AND PHY 121 AND MAE 212 AND MAT 275 AND PHY 131 AND PHY 122 AND PHY 132 AND MAT 242 course(s).		
		🚩	Complete CHM 114 OR CHM 116 course(s).		
		🚩	Minimum 2.00 GPA ASU Cumulative.		
			Term hours subtotal:	15	

Mesa Community College	
Course	Hours
ECE 214	4
MAT 277	3
PHY 131	4
ECE 105	1
MAT 241 or MAT 240	4 5

Term 4 47 - 61 Credit Hours Critical course signified by	Hours	Minimum Grade	Notes
MAE 213: Solid Mechanics	3	C	
MAE 240: Thermofluids I	4	C	
EEE 202: Circuits I	4	C	
MAE 214: Computer-Aided Engineering I	1	C	
MAE 384: Advanced Mathematical Methods for Engineers (CS)	3	C	
Term hours subtotal:	15		

Mesa Community College	
Course	Hours
ECE 215	3
EEE 202	5
ECE 216 and ECE 216LL	2 1

Term 5 62 - 77 Credit Hours Necessary course signified by	Hours	Minimum Grade	Notes
AEE 360: Aerodynamics (L) OR MAE 360: Aerodynamics (L)	4	C	<ul style="list-style-type: none"> Both MAE 362 and MAE 360 must be taken to secure Literacy and Critical Inquiry (L) General Studies credit.
MAE 301: Applied Experimental Statistics	3	C	
MAE 318: System Dynamics and Control	5	C	
AEE 325: Aerospace Structures and Materials OR MAE 325: Aerospace Structures and Materials	4	C	
Term hours subtotal:	16		

Mesa Community College	
Course	Hours
General Studies (HU-C OR HU-G OR HU-H)	3

Term 6 78 - 93 Credit Hours Necessary course signified by	Hours	Minimum Grade	Notes
AEE 313: Aircraft Dynamics and Control OR MAE 313: Aircraft Dynamics and Control	3	C	<ul style="list-style-type: none"> Both MAE 362 and MAE 360 must be taken to secure Literacy and Critical Inquiry (L) General Studies credit.
AEE 362: High-Speed Aerodynamics (L) OR MAE 362: High-Speed Aerodynamics (L)	4	C	
AEE 462: Space Vehicle Dynamics and Control OR MAE 462: Space Vehicle Dynamics and Control	3	C	
Upper Division Track Focus Elective Course	3	C	
Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3		
Term hours subtotal:	16		

Mesa Community College	
Course	Hours
General Studies (SB-C OR SB-G OR SB-H)	3

Term 7 94 - 108 Credit Hours Necessary course signified by	Hours	Minimum Grade	Notes
AEE 463: Aircraft Propulsion OR MAE 463: Aircraft Propulsion	3	C	
AEE 478: Fundamentals of Autonomous Aircraft Systems OR MAE 478: Fundamentals of Autonomous Aircraft Systems	3	C	
MAE 400: Engineering Profession (L)	3	C	
Upper Division Track Focus Elective Course	3	C	
Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	15		

Term 8 109 - 120 Credit Hours Necessary course signified by	Hours	Minimum Grade	Notes
AEE 479: Design of Autonomous Aircraft Systems OR MAE 479: Design of Autonomous Aircraft Systems	3	C	
Upper Division Track Focus Elective Course	3	C	
POS 325: Public Policy Development (SB) OR POS 300: Contemporary Global Controversies (SB & G) OR POS 370: Law and Society (SB) OR PHI 306: Applied Ethics (HU)	3		
Elective	3		
Term hours subtotal:	12		

- For a list of Upper Division Technical Elective & Elective course options, please visit: http://engineering.asu.edu/semte/aerospace_B.html.

Guidance, Navigation, and Controls track	Communications track
EEE 480: Feedback Systems	EEE 203: Signals and Systems I
EEE 481: Computer-Controlled	EEE 304: Signals and Systems II

Systems

MAE 417: Control System Design

EEE 350: Random Signal Analysis

EEE 455: Communication Systems

EEE 459: Communication Networks

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for
Academic Recognition: 56
minimum
Total Community College Hrs: 64
maximum

General University Requirements
Legend

General Studies Core Requirements:

- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Fine Arts and Design (HU)
- Social and Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)

General Studies Awareness
Requirements:

- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition

General Studies designations listed on the major map are current for the 2014 - 2015 academic year.