

**Critical Requirements:** Students who follow the 2008-2009 catalog year and are entering ASU as either a first-time freshman or transfer from any Arizona public university or Arizona community college must complete critical requirements.

Course Subject and Title <i>(courses in bold/shading are critical)</i>	Hrs.	Upper Division	Completed ATP: <input type="checkbox"/> Yes <input type="checkbox"/> No		Completed AGECE: <input type="checkbox"/> Yes <input type="checkbox"/> No	Additional Critical Requirement Notes
			Transfer Course/Grade	Minimum Grade if Required		
<b>TERM ONE: 0-15 CREDIT HOURS</b>						
<b>SES 100: Introduction to Exploration</b>	3	<input type="checkbox"/>			Grade of C	<ul style="list-style-type: none"> <li>An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses</li> <li>ASU Math Placement Exam score determines placement in Mathematics course</li> <li>Consult academic advisor for Learning Community, Academic Success Clusters and First Year Seminar options</li> </ul>
SES 101: Earth, Solar System, and Universe I	3	<input type="checkbox"/>			Grade of C	
SES 103: Earth, Solar System, and Universe Laboratory I	1	<input type="checkbox"/>			Grade of C	
ENG 101 or 102: First-Year Composition or ENG 105: Advanced First-Year Composition or ENG 107 or 108: English for Foreign Students	3	<input type="checkbox"/>			Grade of C	
MAT 170 if needed or elective	3	<input type="checkbox"/>			Grade of C	
Social & Behavioral Science (SB)	3	<input type="checkbox"/>				
<b>TERM TWO: 16-30 CREDIT HOURS</b>						
<b>CHM 113: General Chemistry I (SQ)</b>	4	<input type="checkbox"/>			Grade of C	
<b>MAT 265: Calculus for Engineers I (MA)</b>	3	<input type="checkbox"/>			Grade of C	
SES 102: Earth, Solar System, and Universe II	3	<input type="checkbox"/>			Grade of C	
SES 104: Earth, Solar System, and Universe Laboratory II	1	<input type="checkbox"/>			Grade of C	
ENG 101 or 102: First-Year Composition or ENG 105: Advanced First-Year Composition or ENG 107 or 108: English for Foreign Students	3	<input type="checkbox"/>			Grade of C	
<b>TERM THREE: 31-45 CREDIT HOURS</b>						
<b>CHM 116: General Chemistry II (SQ)</b>	4	<input type="checkbox"/>			Grade of C	<ul style="list-style-type: none"> <li>First Year Composition must be completed by the end of semester 3</li> </ul>
<b>MAT 266: Calculus for Engineers II</b>	3	<input type="checkbox"/>			Grade of C	
<b>SES 210: Engineering Systems and Experimental Design</b>	3	<input type="checkbox"/>			Grade of C	
Humanities, Fine Arts & Design (HU) and Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H):	3	<input type="checkbox"/>				
General Elective	3	<input type="checkbox"/>				
<b>TERM FOUR: 46-60 CREDIT HOURS</b>						
<b>GLG 321: Mineralogy</b>	3	<input checked="" type="checkbox"/>			Grade of C	
<b>PHY 121: University Physics I: Mechanics</b>	3	<input type="checkbox"/>			Grade of C	
<b>PHY 122: University Physics Laboratory I</b>	1	<input type="checkbox"/>			Grade of C	
<b>MAT 267: Calculus for Engineers III</b>	3	<input type="checkbox"/>			Grade of C	
CLAS Science and Society	3	<input type="checkbox"/>			Grade of C	
Literacy and Critical Inquiry (L)	3	<input type="checkbox"/>				
Social & Behavioral Science (SB) and Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H):	3	<input type="checkbox"/>				
<b>TERM FIVE: 61-75 CREDIT HOURS</b>						
GLG 424: Petrology	3	<input checked="" type="checkbox"/>			Grade of C	
PHY 131: University Physics II: Electricity and Magnetism	3	<input type="checkbox"/>			Grade of C	
PHY 132: University Physics Laboratory II	1	<input type="checkbox"/>			Grade of C	
SES 394: Special Topics: Concepts of Electrical & Mechanical Engineering Design	3	<input checked="" type="checkbox"/>			Grade of C	
Upper Division CLAS Science and Society	3	<input checked="" type="checkbox"/>			Grade of C	
<b>TERM SIX: 76-90 CREDIT HOURS</b>						
MAT 275: Modern Differential Equations	3	<input type="checkbox"/>				
SES 311: Essentials of Astrobiology: Exploration for Life in the Universe	3	<input checked="" type="checkbox"/>			Grade of C	
Branch course	3	<input checked="" type="checkbox"/>				
ESE Elective	3	<input checked="" type="checkbox"/>				
Upper division Literacy and Critical Inquiry (L)	3	<input checked="" type="checkbox"/>				
<b>TERM SEVEN: 91-105 CREDIT HOURS</b>						
SES 410: Senior Exploration Project I	3	<input checked="" type="checkbox"/>			Grade of C	
Computer/Statistics/Quantitative applications (CS)	3	<input type="checkbox"/>				
General Elective	3	<input checked="" type="checkbox"/>				
General Elective	2	<input type="checkbox"/>				
Humanities, Fine Arts & Design (HU) and Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H):	3	<input type="checkbox"/>				
<b>TERM EIGHT: 106-120 CREDIT HOURS</b>						
SES 411: Senior Exploration Project II	3	<input checked="" type="checkbox"/>			Grade of C	
Upper division General Elective	3	<input checked="" type="checkbox"/>				
Upper division General Elective	3	<input checked="" type="checkbox"/>				
Upper division General Elective	3	<input checked="" type="checkbox"/>				
Upper division Humanities, Fine Arts & Design (HU) or Social Behavioral Science (SB)	3	<input checked="" type="checkbox"/>				

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**Graduation Requirements Summary:**

Total Hours (120 minimum)	Total Hrs at ASU (30 minimum)	Hrs Resident Credit for Academic Recognition (56 minimum)	Major GPA (2.000 Min.)	Total UD Hrs (45 minimum)	Total Comm. 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 US (C)
  - Global Awareness (G)
  - Historical Awareness (H)
- First Year Composition

**Additional Notes:**

There is room in this roadmap to add a concurrent degree, minor, or certificate