



Associate in Science (AS) Degree  
MCC/ASU Polytechnic Engineering Advisement Flow Chart  
2009-2010 Catalog Year

<u>First Year Composition</u>	<u>Science Requirements</u>	<u>Physics Requirements</u>	<u>Mathematics Requirements</u>	<u>Engineering Requirements</u>
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>FYC</b> ENG 101 or 107 First-Year Comp (3) Completed: _____         </div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px;"> <b>FYC</b> ENG 102 or 108 First-Year Comp (3) Completed: _____         </div>	<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small; margin-right: 5px;">Prerequisite</div> <div style="border: 1px solid black; padding: 5px; flex-grow: 1;">           CHM 130/130LL General Chem I (4) Completed: _____         </div> </div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">           CHM 151/151LL General Chem I (4) Completed: _____         </div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px;">           BIO 181 PHY 131 CHM 152/152LL GLG 101/103  Science Elective (4) Completed: _____         </div> <p style="font-size: small; margin-top: 10px;"><b>Note:</b> Students who have not completed high school chemistry or completed high school chemistry more than two years prior to enrolling in CHM 151 should take CHM 130/130LL.</p>	<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small; margin-right: 5px;">Program Prerequisites</div> <div style="border: 1px solid black; padding: 5px; flex-grow: 1;">           PHY 111 General Physics I (4) Completed: _____         </div> </div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">           PHY 112 General Physics 2 (4) Completed: _____         </div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px;"> <b>SQ</b> PHY 121 Univ Physics I (4) Completed: _____         </div> <p style="font-size: small; margin-top: 10px;"><b>Note:</b> Students who have not completed high school physics or completed high school physics more than two years prior to enrolling in PHY 121 should take PHY 111.</p>	<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small; margin-right: 5px;">Program Prerequisites</div> <div style="border: 1px solid black; padding: 5px; flex-grow: 1;">           MAT 150, 151 or 152 College Algebra (3) Completed: _____         </div> </div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">           MAT 182 or 187 Trig or PreCalc (3) Completed: _____         </div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>MA</b> MAT 221 Calculus I (4) Completed: _____         </div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">           MAT 231 Calculus II (4) Completed: _____         </div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">           MAT 241 Calculus III (4) Completed: _____         </div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px;">           MAT 262 Diff Equations (3) Completed: _____         </div>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">           ECE 102 Engineering Anal (2) Completed: _____         </div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">           ECE 103 Engineering Design (2) Completed: _____         </div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">           ECE 201 Intro to Statics (2) Completed: _____         </div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">           ECE 202 Intro to Dynamics (2) Completed: _____         </div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px;">           ECE 215 Mech of Materials (3) Completed: _____         </div>
<u>Social &amp; Behavioral Sciences</u>				
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SB</b> _____ 3 Credits Completed: _____         </div> <div style="border: 1px solid black; padding: 5px;"> <b>SB</b> _____ 3 Credits Completed: _____         </div>				
<u>Humanities and Fine Arts</u>				
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>HU</b> _____ 3 Credits Completed: _____         </div> <div style="border: 1px solid black; padding: 5px;"> <b>HU</b> _____ 3 Credits Completed: _____         </div>				
<u>Reading and Communication</u>				
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>Oral Communication</b> COM 230 (0-3 Credits) Completed: _____         </div> <div style="border: 1px solid black; padding: 5px;"> <b>Critical Reading</b> CRE 101 (0-3 Credits) Completed: _____         </div>				

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
			Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
<b>TERM ONE: 0-15 CREDIT HOURS</b>					
ASU 101: The ASU Experience	1	<input type="checkbox"/>			<ul style="list-style-type: none"> <li>ASU 101 is for ASU freshman students only not required of transfer students</li> <li>APM 265 must be completed by the end of term 2.</li> <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>PHY 121 must be completed by end of term 3</li> <li>Maintain minimum cumulative GPA of 2.0</li> </ul>
<b>APM 265: Mathematics of Change I (MA) or Pre-req MAT 170: Precalculus</b>	3	<input type="checkbox"/>		Grade of C	
<i>Complete 1 course from:</i> <b>EGR 101: Introduction to Engineering Design I or EGR 102: Introduction to Engineering Design II</b>	3 or 4	<input type="checkbox"/>		Grade of C	
CHM 113: General Chemistry I (SQ)	4	<input type="checkbox"/>			
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 TWO: 16-30 CREDIT HOURS</b>					
<b>PHY 121: University Physics I: Mechanics (if APM 265 (or equivalent) is completed otherwise take Elective</b>	3	<input type="checkbox"/>		Grade of C in PHY 121	<ul style="list-style-type: none"> <li>PHY 121 must be completed by end of term 3</li> <li>Maintain minimum cumulative GPA of 2.0</li> <li>APM 267 must be completed by the end of term 4</li> </ul>
<i>Complete remaining course from:</i> <b>EGR 101: Introduction to Engineering Design I or EGR 102: Introduction to Engineering Design II</b>	3 or 4	<input type="checkbox"/>		Grade of C	
APM 266: Mathematics of Change II Or APM 265: Mathematics of Change I (MA)	3	<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	
EGR 104 (currently EGR 194): Critical Inquiry in Engineering	3	<input type="checkbox"/>			
<b>TERM THREE: 31-45 CREDIT HOURS</b>					
<b>PHY 121: University Physics I</b> or if already completed, take Elective	3	<input type="checkbox"/>		Grade of C in PHY 121	<ul style="list-style-type: none"> <li>Completed First-Year Composition Requirement (ENG 101/107 and ENG 102/108 or ENG 105)</li> <li>PHY 121 must be completed by end of term 3</li> <li>APM 267 must be completed by the end of term 4</li> <li>Maintain minimum cumulative GPA of 2.0</li> </ul>
<b>EGR 201: Fall Multidisciplinary Project</b>	3	<input type="checkbox"/>		Grade of C	
EGR 2** Engineering Fundamentals (five hours of EGR 2xx modules at 1 hour each)	5	<input type="checkbox"/>			
EGR 280: Engineering Statistics (CS)	3	<input type="checkbox"/>			
APM 267: Mathematics of Change III Or APM 266: Mathematics of Change II	3	<input type="checkbox"/>		Grade of C	
<b>TERM FOUR: 46-60 CREDIT HOURS</b>					
<b>EGR 202: Spring Multidisciplinary Project</b>	3	<input type="checkbox"/>		Grade of C	<ul style="list-style-type: none"> <li>APM 267 must be completed by the end of term 4</li> <li>Maintain minimum cumulative GPA of 2.0</li> </ul>
EGR 2** Engineering Fundamentals (five hours of EGR 2xx modules at 1 hour each)	5	<input type="checkbox"/>			
APM 267: Mathematics of Change III or if completed take Humanities, Fine Arts & Design (HU)	3	<input type="checkbox"/>			
MAT 275: Modern Differential Equations (or MAT 274: Elementary Differential Equations)	3	<input type="checkbox"/>			
HTY 316: History of Engineering (SB & G)	3	<input checked="" type="checkbox"/>			
<b>TERM FIVE: 61-75 CREDIT HOURS</b>					
EGR 301: Fall Concentration Project	3	<input checked="" type="checkbox"/>			Consult with advisor for choice of Primary Focus area courses from: <ul style="list-style-type: none"> <li>Civil Infrastructure Focus Area</li> <li>Electrical Engineering Systems Focus Area</li> <li>Mechanical Engineering Systems Focus Area</li> <li>Robotics Focus Area</li> </ul>
EGR 3** Module	1	<input checked="" type="checkbox"/>			
UD Primary Focus Area	3	<input checked="" type="checkbox"/>			
<i>Science Elective: complete once course from:</i> BIO 187: General Biology I (SG) CHM 116: General Chemistry II (SQ) GLG 101/103: Intro to Geology I (Physical) & Lab (SQ, G) PHY 122: University Physics I Lab PHY 131/132: University Physics II (SQ)	4	<input type="checkbox"/>			
Social & Behavioral Science (SB)	3	<input type="checkbox"/>			
Secondary Focus Area (choose with advisor consultation)	3	<input type="checkbox"/>			
<b>TERM SIX: 76-90 CREDIT HOURS</b>					
EGR 302: Spring Concentration Project (L**)	3	<input checked="" type="checkbox"/>			<b>**Literacy &amp; Critical Inquiry (L) designation approval pending</b> Consult with advisor for choice of Primary Focus area courses from: <ul style="list-style-type: none"> <li>Civil Infrastructure Focus Area</li> <li>Electrical Engineering Systems Focus Area</li> <li>Mechanical Engineering Systems Focus Area</li> <li>Robotics</li> </ul>
EGR 3** Module	1	<input checked="" type="checkbox"/>			
Upper division Primary Focus Area	3	<input checked="" type="checkbox"/>			
MAT 343: Applied Linear Algebra	3	<input checked="" type="checkbox"/>			
Humanities, Fine Arts & Design (HU)	3	<input type="checkbox"/>			
Secondary Focus Area (choose w/advisor consultation)	3	<input type="checkbox"/>			
<b>TERM SEVEN: 91-105 CREDIT HOURS</b>					
EGR 401: Engineering Capstone Project I	4	<input checked="" type="checkbox"/>			Consult with advisor for choice of Primary Focus area courses from: <ul style="list-style-type: none"> <li>Civil Infrastructure Focus Area</li> <li>Electrical Engineering Systems Focus Area</li> <li>Mechanical Engineering Systems Focus Area</li> <li>Robotics</li> </ul>
Upper division Primary Focus Area	3	<input checked="" type="checkbox"/>			
Math or Science (PHY 321 or 331 or ABS 485)	3	<input type="checkbox"/>			
Upper division Secondary Focus Area (choose w/advisor consultation)	3	<input checked="" type="checkbox"/>			
Elective	3	<input type="checkbox"/>			

Course Subject and Title <i>(courses in bold/shading are critical)</i>	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
<b>TERM EIGHT: 106-120 CREDIT HOURS</b>					
EGR 402: Engineering Capstone Project II	4	<input checked="" type="checkbox"/>			Consult with advisor for choice of Primary focus area courses from: <ul style="list-style-type: none"> <li>• Civil Infrastructure Focus Area</li> <li>• Electrical Engineering Systems Focus Area</li> <li>• Mechanical Engineering Systems Focus Area</li> <li>• Robotics</li> </ul>
Upper division Primary Focus Area	3	<input checked="" type="checkbox"/>			
Upper division Humanities, Fine Arts & Design (HU) or Social & Behavioral Science (SB) AND Cultural Awareness in the US (C), Global Awareness (G) or Historical Awareness (H)	3	<input checked="" type="checkbox"/>			
Upper division Secondary Focus Area (choose w/ advisor consultation)	3	<input checked="" type="checkbox"/>			
Elective	3	<input type="checkbox"/>			

**Graduation Requirements Summary:**

Total Hours (128 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:**