MESA COMMUNITY COLLEGE

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

First Year Composition

FYC ENG 101 or 107
First-Year Comp (3)
Completed: _____

FYC ENG 102 or 108
First-Year Comp (3)
Completed: _____

Social & Behavioral Sciences

SB ECN 211 or 212
3 Credits
Completed: _____

SB _____
3 Credits
Completed: _____

Humanities and Fine Arts

HU _____
3 Credits
Completed: _____

HU _____
3 Credits
Completed: _____

Reading and Communication

Oral Communication
COM 230 (0-3 Credits)
Completed: _____

Critical Reading
CRE 101 (0-3 Credits)
Completed: _____

Chem & Geo Requirements

Program Prerequisites

CHM 130/130LL
General Chem I (4)
Completed: _____

CHM 151/151LL
General Chem I (4)
Completed: _____

CHM 152/152LL
General Chem II (4)
Completed: _____

GLG 110
Environ Geology (3)
Completed: _____

Note: 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.

Physics Requirements

Program Prerequisites

PHY 111
General Physics I (4)
Completed: _____

PHY 112
General Physics 2 (4)
Completed: _____

SQ PHY 121
Univ Physics I (4)
Completed: _____

SQ PHY 131
Univ Physics II (4)
Completed: _____

Note: 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.

Mathematics Requirements

Program Prerequisites

MAT 150, 151 or 152
College Algebra (3)
Completed: _____

MAT 182 or 187
Trig or PreCalc (3)
Completed: _____

MA MAT 221
Calculus I (4)
Completed: _____

MAT 225
Linear Algebra (3)
Completed: _____

MAT 231
Calculus II (4)
Completed: _____

MAT 241
Calculus III (4)
Completed: _____

MAT 262
Diff Equations (3)
Completed: _____

Engineering Requirements

ECE 102
Engineering Anal (2)
Completed: _____

ECE 103
Engineering Design (2)
Completed: _____

ECE 201
Intro to Statics (2)
Completed: _____

ECE 202
Intro to Dynamics (2)
Completed: _____

ECE 203
Appl of Mech (2)
Completed: _____

ECE 215
Mech of Materials (3)
Completed: _____

EEE 202
Circuits & Devices (5)
Completed: _____

Major Map: Civil Engineering – Bachelor of Science in Engineering (B.S.E.)

Ira A. Fulton School of Engineering, Tempe Campus
Catalog Year: 2009-2010

Mesa Community College courses shown in blue.

Completed ATP: ☐ *Yes* ☐ *No* | *Completed AGEC:* ☐ *Yes* ☐ *No*

Course Subject and Title *(courses in **bold/shading** are critical)*	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
TERM ONE: 0-15 CREDIT HOURS					
ASU 101-FSE: The ASU Experience	1	☐	ECE 102/103		• **Complete CHM 114 or 116; MAT 265 with a minimum grade of "C"** • ASU 101-FSE should be completed first semester. • An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses • ASU Math Placement Exam score determines placement in Mathematics course *CHM 113 is a prerequisite and does not apply toward degree credit. **If ENG 105 a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
CEE 100: Intro to Civil and Environmental Engineering OR ECN 211/212 (SB): Macroeconomic Principles/ Microeconomic Principles or ECN 201: Economic Issues & Analysis (SB)	2 or 3	☐	ECE 102 *(2)* ECE 103 *(2)*	Grade of C in CEE 100	
CHM 114: General Chemistry for Engineers (SQ) OR CHM 116: General Chemistry II* (SQ)	4	☐	CHM 152/*152LL*		
MAT 265: Calculus for Engineers I	3	☐	MAT 221 *(4)*	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	☐	ENG 101/102 ENG 107/108	Grade of C	
TERM TWO: 16-30 CREDIT HOURS					
CEE 100: Intro to Civil and Environmental Engineering OR ECN 211/212 (SB): Macroeconomic Principles/ Microeconomic Principles or ECN 201: Economic Issues & Analysis (SB)	2 or 3	☐	ECN 211 *(3)* ECN 212 *(3)*	Grade of C in CEE 100	• **Complete CEE 100; MAT 242, 266; PHY 121 & 122 each with a minimum grade of "C"**
MAT 242: Elementary Linear Algebra	2	☐	MAT 225 *(3)*	Grade of C	
MAT 266: Calculus for Engineers II	3	☐	MAT 231 *(4)*	Grade of C	
PHY 121/122: University PhysicsI/ Laboratory I (SQ)	3/1	☐	PHY 121 *(4)*	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	☐	ENG 101/102 ENG 107/108	Grade of C	
TERM THREE: 31-45 CREDIT HOURS					
CEE 210: Engineering Mechanics: Statics	3	☐	ECE 201 to 203	Grade of C	• **Complete CEE 210; MAT 267, 275, PHY 131 & 132 each with a minimum grade of "C"** • Complete First-Year Composition requirement: ENG 101 & 102 or ENG 107 & 108 or ENG 105
MAT 267: Calculus for Engineers III	3	☐	MAT 241 *(4)*	Grade of C	
MAT 275: Modern Differential Equations (MA)	3	☐	MAT 262 *(3)*	Grade of C	
PHY 131/132: University Physics II: Electricity and Magnetism/ Laboratory II (SQ)	3/1	☐	PHY 131 *(4)*	Grade of C	
TERM FOUR: 46-60 CREDIT HOURS					
CEE 212: Engineering Mechanics: Dynamics	3	☐	ECE 201 to 203	Grade of C	• **Complete CEE 212, CEE 213 each with a minimum grade of "C"**
CEE 213: Introduction to Deformable Solids	3	☐	ECE 215 *(3)*	Grade of C	
EEE 202: Circuits I OR MAE 240: Thermofluids I	4	☐	EEE 202 *(5)*		
Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB) AND Cultural Diversity in the US (C) or Global Awareness (G):	3	☐	HU Elective *(3)* SB Elective *(3)*		
Basic Science Elective:	3	☐	GLG 110 *(3)*		
TERM FIVE: 61-75 CREDIT HOURS					
#CEE 384: Numerical Methods for Engineers (CS)	3	☒		Grade of C	# Designates Major Course: A minimum cumulative GPA of 2.30 required in all CEE 3XX courses, a minimum cumulative GPA of 2.30 required in all CEE 4XX courses. NOTE: A maximum of two "D" grades are allowed in all 3XX and 4XX courses combined.
Select 3 # CEE 300: Engineering Business Practice (L) (3 hrs) # CEE 321: Structural Analysis and Design (4 hrs) # CEE 341: Fluid Mechanics for Civil Engineers (4 hrs) # CEE 351: Geotechnical Engineering (4 hrs) # CEE 353: Civil Engineering Materials (3 hrs) # CEE 361: Introduction to Environmental Engineering (4 hrs) # CEE 372: Transportation Engineering (4 hrs)	10-12	☒		Grade of C in each	
IEE 380: Probability and Statistics for Engineering Problem Solving	3	☒			
TERM SIX: 76-90 CREDIT HOURS					
Select remaining 4 # CEE 300: Engineering Business Practice(L) (3 hrs) # CEE 321: Structural Analysis and Design (4 hrs) # CEE 341: Fluid Mechanics for Civil Engineers (4 hrs) # CEE 351: Geotechnical Engineering (4 hrs) # CEE 353: Civil Engineering Materials (3 hrs) # CEE 361: Introduction to Environmental Engineering (4 hrs) # CEE 372: Transportation Engineering (4 hrs)	14 - 16	☒		Grade of C in each	# Designates Major Course: A minimum cumulative GPA of 2.30 required in all CEE 3XX courses, a minimum cumulative GPA of 2.30 required in all CEE 4XX courses. NOTE: A maximum of two "D" grades are allowed in all 3XX and 4XX courses combined.
TERM SEVEN: 91-105 CREDIT HOURS					
#CEE 400 Earth Systems Engineering and Management (HU, H) OR Social & Behavioral Science (SB) AND Cultural Diversity in the US (C) or Global Awareness (G)	3	☐		Grade of C in CEE 400	• Technical Elective and Design Elective requirements: Complete a total of 2 design electives and 4 technical electives during Term 7 and Term 8. See Advisor for guidance in selection. # Designates Major Course: A minimum cumulative GPA of 2.30 required in all CEE 3XX courses, a minimum cumulative GPA of 2.30 required in all CEE 4XX courses. NOTE: A maximum of two "D" grades are allowed in all 3XX and 4XX courses combined.
# Technical Elective	3	☒		Grade of C	
# Technical Elective	3	☒		Grade of C	
# Design Elective or # Technical Elective	3	☒		Grade of C	
# Design Elective or # Technical Elective	3	☒		Grade of C	

ASU ARIZONA STATE UNIVERSITY

Major Map: Civil Engineering – Bachelor of Science in Engineering (B.S.E.)

Ira A. Fulton School of Engineering, Tempe Campus
Catalog Year: 2009-2010

Course Subject and Title *(courses in **bold/shading** are critical)*	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
TERM EIGHT: 106-120 CREDIT HOURS					
# CEE 400: Earth Systems Engineering and Management (HU, H) OR Social & Behavioral Science (SB) AND Cultural Diversity in the US (C) or Global Awareness (G) if CEE 400 completed	3	☐	SB Elective *(3)*	Grade of C in CEE 400	• Technical Elective and Design Elective requirements: Complete a total of 2 design electives and 4 technical electives during Term 7 and Term 8. See Advisor for guidance in selection. # Designates Major Course: A minimum cumulative GPA of 2.30 required in all CEE 3XX courses, a minimum cumulative GPA of 2.30 required in all CEE 4XX courses. NOTE: A maximum of two "D" grades are allowed in all 3XX and 4XX courses combined.
# CEE 486: Integrated Civil Engineering Design (L)	4	☒		Grade of C	
# Technical Elective or # Design Elective	3	☒		Grade of C	
# Technical Elective or # Design Elective	3	☒		Grade of C	
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C) or Global Awareness (G)	3	☐	HU Elective *(3)*		

Graduation Requirements Summary:

Total Hours Regular Curriculum (120)	Total UD Hrs (45 min)	Total Hrs at ASU (30 min)	Cumulative GPA (2.00 minimum)	Major GPA (2.30 Min. CUM GPA in CEE 3XX, 2.30 min CUM GPA in CEE 4XX))	Hrs Resident Credit for Academic Recognition (56 min)	Total Comm. College Hrs. (64 Max)

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: