MESA COMMUNITY COLLEGE

Associate in Science (AS) Degree
MCC/ASU Fulton Computer Systems 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 _____
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: _____

Comp Science Requirements

CSC 100
Intro to Comp Sci (3)
Completed: _____

CSC 120
Digital Design (4)
Completed: _____

CSC 205
Obj Orient Prog (3)
Completed: _____

CSC 220
Prog Comp Eng (3)
Completed: _____

CSC 230
Computer Org (4)
Completed: _____

BIO 181
General Biology I (4)
Completed: _____

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 227
Discrete Math (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: _____

EEE 202
Circuits & Devices (5)
Completed: _____

ASU ARIZONA STATE UNIVERSITY

Major Map: Computer Systems 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 CSE 100 or 110, 101; MAT 265 each with a minimum grade of "C"**
# CSE 100: Principles of Programming with C++ (CS) OR # CSE 110: Principles of Programming with Java (CS)	3	☐	CSC 100 *(3)*	Grade of C	• ASU 101-FSE should be completed first semester.
# CSE 101: Introduction to Computer Science & Engineering	2	☐	ECE 102/103	Grade of C	• An SAT, ACT, Accuplacer, or TOEFL score determines placement into first-year composition courses
MAT 265: Calculus for Engineers I (MA)	3	☐	MAT 221 *(4)*	Grade of C	• ASU Math Placement Exam score determines placement in Mathematics course
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	**If ENG 105 a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H)	3	☐	SB Elective *(3)*		# Designates Major Course: A minimum cumulative GPA of 2.0 required.
TERM TWO: 16-30 CREDIT HOURS					
# CSE 120: Digital Design Fundamentals	3	☐	CSC 120 *(4)*	Grade of C	• **Complete CSE 120, 205; MAT 266 each with a minimum grade of "C"**
# CSE 205:Object-Oriented Programming & Data Structures (CS)	3	☐	CSC 205 *(3)*	Grade of C	# Designates Major Course: A minimum cumulative GPA of 2.0 required.
MAT 266: Calculus for Engineers II	3	☐	MAT 231 *(4)*	Grade of C	
BIO 187: General Biology I (SQ) OR BIO 188: General Biology Laboratory II (SQ)	4	☐	BIO 181 *(4)*		
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					
# CSE 230: Computer Organization and Assembly Language Programming	3	☐	CSC 230 *(4)*	Grade of C	• **Complete CSE 230; MAT 243, 267 each with a minimum grade of "C"**
MAT 243: Discrete Mathematical Structures	3	☐	MAT 227 *(3)*	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	# Designates Major Course: A minimum cumulative GPA of 2.0 required.
PHY 121/122: University Physics I/Laboratory I (SQ)	3/1	☐	PHY 121 *(4)*		
TERM FOUR: 46-60 CREDIT HOURS					
# CSE 220: Programming for Computer Engineering	3	☐	CSC 220 *(3)*	Grade of C	• **Complete CSE 220 with a minimum grade of "C"**
MAT 275: Modern Differential Equations	3	☐	MAT 262 *(3)*		# Designates Major Course: A minimum cumulative GPA of 2.0 required.
PHY 131/132: University Physics II Electricity and Magnetism/Laboratory II (SQ)	3/1	☐	PHY 131 *(4)*		
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), Global Awareness (G), or Historical Awareness (H)	3	☐	HU Elective *(3)*		
Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H)	3	☐	SB Elective *(3)*		
TERM FIVE: 61-75 CREDIT HOURS					
# EEE 202: Circuits I	4	☐	EEE 202 *(5)*		# Designates Major Course: A minimum cumulative GPA of 2.0 required.
# IEE 380: Probability and Statistics for Engineering Problem Solving	3	☒			
# CSE 301: Computing Ethics	1	☒		Grade of C	
# CSE 310: Data Structures and Algorithms	3	☒		Grade of C	
# CSE 360: Introduction to Software Engineering	3	☒		Grade of C	
TERM SIX: 76-90 CREDIT HOURS					
# EEE 334: Circuits II	4	☒			# Designates Major Course: A minimum cumulative GPA of 2.0 required.
# CSE 320: Design and Synthesis of Digital Hardware	3	☒		Grade of C	
# CSE 325: Embedded Micro Systems	3	☒		Grade of C	
# MAT 343: Applied Linear Algebra	3	☒			
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H)	3	☐	HU Elective *(3)*		
TERM SEVEN: 91-105 CREDIT HOURS					
# CSE 423: Systems Capstone Project I (L)	3	☒		Grade of C	• See Advisor for approved list of CSE Technical Electives
# CSE 430: Operating Systems	3	☒		Grade of C	# Designates Major Course: A minimum cumulative GPA of 2.0 required.
# CSE Technical Elective	3	☒		Grade of C	
# CSE Technical Elective	3	☒		Grade of C	
UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB)	3	☒			
TERM EIGHT: 106-120 CREDIT HOURS					
# CSE 420: Computer Architecture I	3	☒		Grade of C	• See Advisor for approved list of CSE Technical Electives
# CSE 424: Systems Capstone Project II (L)	3	☒		Grade of C	# Designates Major Course: A minimum cumulative GPA of 2.0 required.
# CSE 434: Computer Networks	3	☒		Grade of C	
# CSE Technical Elective	3	☒		Grade of C	
# CSE Technical Elective	3	☒		Grade of C	

ASU ARIZONA STATE UNIVERSITY

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

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

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 (2.00 minimum GPA)	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: