MESA COMMUNITY COLLEGE

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

Chemistry 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: _____

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

CSC 100 or 110
Intro to Comp Sci (3)
Completed: _____

CSC 205
Obj Orient Prog (3)
Completed: _____

ECE 102
Engineering Anal (2)
Completed: _____

ECE 103
Engineering Design (2)
Completed: _____

ECE 111
Bioengineering Sys (3)
Completed: _____

EEE 202
Circuits & Devices (5)
Completed: _____

ASU ARIZONA STATE UNIVERSITY

Major Map: Industrial 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.

Course Subject and Title *(courses in bold/shading are critical)*	Hrs.	Upper Division	Completed ATP: ☐ Yes ☐ No Transfer Course/Grade	Minimum Grade if Required	Completed AGEC: ☐ Yes ☐ No Additional Critical Requirement Notes
TERM ONE: 0-15 CREDIT HOURS					
ASU 101-FSE: The ASU Experience	1	☐	ECE 102/103		• **Complete at least one of: BME 111; CSE 110 (or 100) with a minimum grade of "C"; IEE 100 with a minimum grade of "C"; MAT 265 with a minimum grade of "C"**
IEE 100: Intro to Engineering Design OR CSE 110: Principles of Programming with Java (or CSE 100: Principles of Programming with C++) (CS)	2 or 3	☐	ECE 102 *(2)* ECE 103 *(2)*	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 ** If ENG 105 a 3 hr applicable elective must also be taken prior to graduation. See Advisor.
BME 111: Engineering Perspectives on Biological Systems	3	☐	ECE 111 *(3)*		
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	
Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H)	3	☐	SB Elective		
TERM TWO: 16-30 CREDIT HOURS					
IEE 100: Intro to Engineering Design OR CSE 110: Principles of Programming with Java (or CSE 100: Principles of Programming with C++) (CS)	2 or 3	☐	CSC 100 *(3)* CSC 110 *(3)*	Grade of C	• **Complete** - **CSE 110 (or 100) with a minimum grade of "C", OR PHY 121 & 122 with a minimum grade of "C"** - **ENG 101 or 107 or 105 with minimum grade of "C"** - **IEE 100 with a minimum grade of "C"** - **MAT 265 with a minimum grade of "C"**
MAT 266: Calculus for Engineers II	3	☐	MAT 231 *(4)*	Grade of C	
PHY 121/122: University Physics I/ 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					
ECN 211: Macroeconomic Principles (SB)	3	☐	ECN 211 *(3)*		• **Complete CSE 110 (or 100) with a minimum grade of "C", PHY 121 & 122 with a minimum grade of "C"** • **Complete ECN 211; BME 111; MAT 266 with a minimum grade of "C"** • Complete First Year Composition requirement: ENG 101 & 102 or ENG 107 & 108 or ENG 105
CSE 205: Concepts of Computer Design and Data (CS)	3	☐	CSC 205 *(3)*		
IEE 210: Introduction to Industrial Engineering	3	☐		Grade of C	
MAT 267: Calculus for Engineers III	3	☐	MAT 241 *(4)*		
PHY 131/132: University Physics II Electricity and Magnetism/ Laboratory II (SQ)	3/1	☐	PHY 131 *(4)*		
TERM FOUR: 46-60 CREDIT HOURS					
IEE 220: Business/Industrial Engineering	3	☐		Grade of C	• **Complete IEE 220 with a minimum grade of "C"** *CHM 113 is a prerequisite and does not apply towards degree credit
CHM 114: General Chemistry for Engineers OR CHM 116: General Chemistry II *	4	☐	CHM 152/152L		
MAT 242: Elementary Linear Algebra	2	☐	MAT 225 *(3)*		
MAT 275: Modern Differential Equations (MA)	3	☐	MAT 262 *(3)*		
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H)	3	☐	HU Elective		
TERM FIVE: 61-75 CREDIT HOURS					
IEE 300: Economic Analysis for Engineers	3	☒		Grade of C	
IEE 305: Information Systems Engineering	3	☒		Grade of C	
IEE 380: Probability and Statistics for Engineering Problem Solving	3	☒		Grade of C	
IEE 382: Probability & Statistics Lab	1	☒		Grade of C	
Choose 2: EEE 202: Circuits I (4 hrs) MAE 212: Engineering Mechanics (4 hrs) MSE 250: Structure and Properties of Materials (3 hrs)	7 or 8	☐	ECE 214 *(4)*		
TERM SIX: 76-90 CREDIT HOURS					
IEE 376: Operational Research Deterministic Technology	3	☒		Grade of C	
IEE 369: Work Analysis and Design (L)	3	☒		Grade of C	
Choose remaining 1: EEE 202: Circuits I (4 hrs) MAE 212: Engineering Mechanics (4 hrs) MSE 250: Structure and Properties of Materials (3 hrs)	3 or 4	☐	EEE 202 *(5)*		
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H)	3	☐	HU Elective		
TERM SEVEN: 91-105 CREDIT HOURS					
IEE 470: Stochastic Operations Research	3	☒		Grade of C	
IEE 474: Quality Control	3	☒		Grade of C	
IEE 475: Simulating Stochastic Systems	4	☒		Grade of C	
Career Focused Elective	3	☒			
UD Humanities, Fine Arts & Design (HU) OR Social & Behavioral Science (SB)	3	☒			
TERM EIGHT: 106-120 CREDIT HOURS					
IEE 461: Production Control	3	☒		Grade of C	
IEE 490: Project in Design/Development (L)	3	☒		Grade of C	
IEE Technical Elective	3	☒		Grade of C	
Career Focused Elective	3	☒			
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ASU ARIZONA STATE UNIVERSITY

Major Map: Industrial 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: