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

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

Course Subject and Title	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
ASU 101-FSE: The ASU Experience	1	☐			• **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	☐		Grade of C	• ASU 101-FSE should be completed first semester.
# CSE 101: Introduction to Computer Science & Engineering	2	☐		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	☐		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	☐		Grade of C	**If ENG 105 a 3 hr applicable elective must also be taken prior to graduation. See Advisor. # Designates Major Course: A minimum cumulative GPA of 2.0 required.
Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H)	3	☐			

TERM TWO: 16-30 CREDIT HOURS

Course Subject and Title	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
# CSE 120: Digital Design Fundamentals	3	☐		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	☐		Grade of C	# Designates Major Course: A minimum cumulative GPA of 2.0 required.
MAT 266: Calculus for Engineers II	3	☐		Grade of C	
BIO 187: General Biology I (SQ) OR BIO 188: General Biology Laboratory II (SQ)	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	☐		Grade of C	

TERM THREE: 31-45 CREDIT HOURS

Course Subject and Title	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
# CSE 230: Computer Organization and Assembly Language Programming	3	☐		Grade of C	• **Complete CSE 230; MAT 243, 267 each with a minimum grade of "C"**
MAT 243: Discrete Mathematical Structures	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	☐		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	☐			

TERM FOUR: 46-60 CREDIT HOURS

Course Subject and Title	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
# CSE 220: Programming for Computer Engineering	3	☐		Grade of C	• **Complete CSE 220 with a minimum grade of "C"**
MAT 275: Modern Differential Equations	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	☐			
Humanities, Fine Arts & Design (HU) AND Cultural Diversity in the US (C), Global Awareness (G), or Historical Awareness (H)	3	☐			
Social & Behavioral Science (SB) AND Cultural Diversity in the US (C), Global Awareness (G) or Historical Awareness (H)	3	☐			

TERM FIVE: 61-75 CREDIT HOURS

Course Subject and Title	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
# EEE 202: Circuits I	4	☐			# 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

Course Subject and Title	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
# 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	☐			

TERM SEVEN: 91-105 CREDIT HOURS

Course Subject and Title	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
# 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

Course Subject and Title	Hrs.	Upper Division	Transfer Course/Grade	Minimum Grade if Required	Additional Critical Requirement Notes
# 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	

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: