

2014 - 2015 Major Map
Computer Systems Engineering (Information Assurance), BSE

Ira A. Fulton Schools of Engineering
Tempe campus
ESCSEIBSE

Term 1	0 - 15 Credit Hours	Critical course signified by	Hours	Minimum Grade	Notes
		🚩	CSE 110: Principles of Programming with Java (CS)	3	<ul style="list-style-type: none"> An SAT, ACT, Accuplacer, TOEFL or IELTS score determines placement into first-year composition courses ASU Math Placement Exam score determines placement in Mathematics course ASU 101 or College specific equivalent First Year Seminar required of all freshman students ASU 101-CSE should be completed first semester. If ENG 105 is taken, a 3 hour applicable elective must also be taken prior to graduation. See Advisor.
		🚩	MAT 265: Calculus for Engineers I (MA)	3	
			ASU 101-CSE: The ASU Experience	1	
			ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition	3	
			FSE 100: Introduction to Engineering	2	
			Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3	
		🚩	Minimum 2.00 GPA ASU Cumulative.		
			Term hours subtotal:	15	

Mesa Community College	
Course	Hours
CSC 110	3
MAT 221 or MAT 220	4 5
ECE 102 and ECE 103	2 2
ENG 101 or ENG 102 OR ENG 107 or ENG 108	3
General Studies (SB-C OR SB-G OR SB-H)	3





*** ECE 102 and ECE 103 satisfy both
ASU 101 and FSE 100

Term 2	16 - 31 Credit Hours	Critical course signified by	Hours	Minimum Grade	Notes
		🚩	CSE 205: Object-Oriented Programming and Data Structures (CS)	3	<ul style="list-style-type: none"> Select BIO or CHM from Major Map list below.
		🚩	MAT 266: Calculus for Engineers II (MA)	3	
			Biology or Chemistry Course	4	
			ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition	3	
			Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3	
		🚩	Complete ENG 101 OR ENG 105 OR ENG 107 course(s).		
		🚩	Minimum 2.00 GPA ASU Cumulative.		
			Term hours subtotal:	16	



Mesa Community College	
Course	Hours
CSC 205	3
MAT 231 or MAT 230	4 5
CHM151 or CHM 152 or BIO 181 or BIO 182	3
ENG 101 or ENG 102 OR ENG 107 or ENG 108	3
General Studies (HU-C OR HU-G OR HU-H)	3

Term 3	32 - 47 Credit Hours	Critical course signified by	Hours	Minimum Grade	Notes
		🚩	CSE 120: Digital Design Fundamentals	3	
		🚩	MAT 243: Discrete Mathematical Structures	3	
		🚩	MAT 267: Calculus for Engineers III (MA)	3	
			PHY 121: University Physics I: Mechanics (SQ)	3	
			PHY 122: University Physics Laboratory I (SQ)	1	
			Humanities, Fine Arts and Design (HU) AND Cultural Diversity in the U.S. (C) OR Humanities, Fine Arts and Design (HU) AND Global Awareness (G) OR Humanities, Fine Arts and Design (HU) AND Historical Awareness (H)	3	
		🚩	Minimum 2.00 GPA ASU Cumulative.		
			Complete Mathematics (MA) requirement.		
			Term hours subtotal:	16	



Mesa Community College	
Course	Hours
CSC 120	4
MAT 227	3
MAT 241 or MAT 240	4 5
PHY 121	4
General Studies (HU-C OR HU-G OR HU-H)	3


Term 4 48 - 63 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 CSE 220: Programming for Computer Engineering	3	C	
 CSE 230: Computer Organization and Assembly Language Programming	3	C	
MAT 275: Modern Differential Equations (MA)	3	C	
PHY 131: University Physics II: Electricity and Magnetism (SQ)	3	C	
PHY 132: University Physics Laboratory II (SQ)	1	C	
Social and Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) OR Social and Behavioral Sciences (SB) AND Global Awareness (G) OR Social and Behavioral Sciences (SB) AND Historical Awareness (H)	3		
 Complete MAT 265 AND MAT 266 AND MAT 267 AND MAT 243 AND CSE 110 AND CSE 205 AND CSE 120 AND CSE 230 AND CSE 220 course(s).			
Term hours subtotal:	16		


Mesa Community College	
Course	Hours
CSC 220	3
CSC 230	4
MAT 277	3
PHY 131	4
General Studies (SB-C OR SB-G OR SB-H)	3

Term 5 64 - 77 Credit Hours Necessary course signified by 	Hours	Minimum Grade	Notes
 CSE 310: Data Structures and Algorithms	3	C	
CSE 301: Computing Ethics	1	C	
CSE 320: Design and Synthesis of Digital Hardware	3	C	
EEE 202: Circuits I	4	C	
IEE 380: Probability and Statistics for Engineering Problem Solving (CS)	3	C	
Term hours subtotal:	14		

Mesa Community College	
Course	Hours
EEE 202	5

Term 6 78 - 93 Credit Hours Necessary course signified by 	Hours	Minimum Grade	Notes
 CSE 325: Embedded Microprocessor Systems	3	C	
CSE 360: Introduction to Software Engineering	3	C	
EEE 334: Circuits II	4	C	
MAT 343: Applied Linear Algebra	3	C	
Upper Division Humanities, Fine Arts and Design (HU) OR Upper Division Social and Behavioral Sciences (SB)	3		
Term hours subtotal:	16		

Term 7 94 - 108 Credit Hours Necessary course signified by 	Hours	Minimum Grade	Notes
 CSE 423: Systems Capstone Project I (L)	3	C	<ul style="list-style-type: none"> Select Information Assurance course from Major Map list below.
CSE 434: Computer Networks	3	C	
CSE 465: Information Assurance	3	C	
Upper Division Information Assurance	6	C	
Term hours subtotal:	15		

Term 8 109 - 120 Credit Hours Necessary course signified by 	Hours	Minimum Grade	Notes
 CSE 424: Systems Capstone Project II (L)	3	C	<ul style="list-style-type: none"> Select Information Assurance course from Major Map list below.
CSE 420: Computer Architecture I	3	C	
CSE 430: Operating Systems	3	C	
Upper Division Information Assurance	3	C	
Term hours subtotal:	12		

Biology or Chemistry Courses	Information Assurance Courses (Select 3)
BIO 181: General Biology I (SQ)	CSE 466: Computer Systems Security
BIO 182: General Biology II (SG)	CSE 467: Data and Information Security
CHM 113: General Chemistry I (SQ)	

CHM 116: General Chemistry II (SQ)

CSE 468: Computer Network Security

CHM 114: General Chemistry for Engineers (SQ)

CSE 469: Computer and Network Forensics

Total Hours: 120
Upper Division Hours: 45 minimum
Major GPA: 2.00 minimum
Cumulative GPA: 2.00 minimum
Total hrs at ASU: 30 minimum
Hrs Resident Credit for Academic Recognition: 56 minimum
Total Community 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 U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition

General Studies designations listed on the major map are current for the 2014 - 2015 academic year.