2024 - 2025 Major Map
Computer Science, BA

School/College: New College of Interdisciplinary Arts and Sciences Ira A. Fulton Schools of Engineering
ESCSEBA

Term 1 0 - 16 Credit Hours Critical course signified by	Hours	Minimum Grade	Notes
CSE 110: Principles of Programming (QTRS OR CS)	3	C	• Prerequisite MAT coursework may be required in Term 1 to prepare for MAT 210 (or higher-level MA) in Term 2. MAT 117 or MAT 170 with a C or better serves as a prerequisite for MAT 210. • ASU 101 or college-specific First-Year Seminar required of all first-year students. • Select your Career Interest Communities and play me3@ASU.
ASU 101-CAI: 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	C	
MAT 210: Brief Calculus (MATH OR MA) OR MAT 251: Calculus for Life Sciences (MATH OR MA) OR MAT 265: Calculus for Engineers I (MATH OR MA) OR MAT 270: Calculus with Analytic Geometry I (MATH OR MA)	3	C	
Humanities, Arts and Design (HUAD)	3		
Elective	3		
Minimum 2.00 GPA ASU Cumulative.			
Complete Mathematics (MATH) requirement.			
Term hours subtotal:	16		

Term 2 16 - 32 Credit Hours Critical course signified by	Hours	Minimum Grade	Notes
CSE 205: Object-Oriented Programming and Data Structures (QTRS OR CS)	3	C	• Activate your Handshake account and build out your profile. • Create a first draft resume. • Join a student club or professional organization. • Secure a part-time job or volunteer experience. • Get involved with EPICS, the Generator Labs, and the Fulton Start-Up Center.
STP 226: Elements of Statistics (QTRS OR CS)	3	C	
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	C	
Humanities, Arts and Design (HUAD)	3		
Scientific Thinking in Natural Sciences (SCIT)	4		
Complete ENG 101 OR ENG 105 OR ENG 107 course(s).			
Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		

Term 3 32 - 48 Credit Hours Critical course signified by	Hours	Minimum Grade	Notes
CSE 240: Introduction to Programming Languages	3	C	• Develop your research skills. • Develop your professional skills.

!	MAT 243: Discrete Mathematical Structures	3	C
	Scientific Thinking in Natural Sciences (SCIT)	4	
	Social and Behavioral Sciences (SOBE)	3	
	Elective	3	
!	Minimum 2.00 GPA ASU Cumulative.		
	Term hours subtotal:	16	

- Prep for success using the Sophomore Guide.

Term 4 48 - 64 Credit Hours Critical course signified by !	**Hours**	**Minimum Grade**	**Notes**
! ACO 201: Data Structures and Algorithms (QTRS OR CS) OR SER 222: Design and Analysis of Data Structures and Algorithms OR CPI 220: Applied Data Structures and Algorithms OR CSE 310: Data Structures and Algorithms	3	C	• Pursue an undergraduate research experience. • Apply for internships. • Attend career fairs and events.
! CSE 225: Introduction to Modern Computing Systems	3	C	
CSE 301: Computing Ethics	1	C	
CSE 360: Introduction to Software Engineering	3	C	
Governance and Civic Engagement (CIVI)	3		
Elective	3		
! Minimum 2.00 GPA ASU Cumulative.			
Term hours subtotal:	16		

Term 5 64 - 79 Credit Hours Necessary course signified by ★	**Hours**	**Minimum Grade**	**Notes**
★ ACO 330: Computer Networks	3	C	• Plan for success using the Junior Guide. • Network at student organization competitions or professional societies.
★ ACO 350: Systems Programming (QTRS OR CS)	3	C	
Upper Division Communication Elective	3	C	
Upper Division Computing Elective	3	C	
Sustainability (SUST)	3		
Term hours subtotal:	15		

Term 6 79 - 96 Credit Hours Necessary course signified by ★	**Hours**	**Minimum Grade**	**Notes**
★ ACO 320: Database Systems	3	C	• Research and prepare for graduate school. • Apply for an engineering accelerated program. • Develop a professional profile online.
Complete 2 courses: Upper Division Computing Elective	6	C	
Global Communities, Societies and Individuals (GCSI)	3		

	Upper Division Elective	2	
	Elective	3	
	Term hours subtotal:	17	

Term 7 96 - 108 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ CSE 484: Internship OR CSE 499: Individualized Instruction OR ACO 499: Individualized Instruction	3	C	• Completion of all major MAT/STP coursework (MAT 210, MAT 243, and STP 226) and the listed CSE or ACO prerequisites with a C or better is required prior to enrollment in the experiential learning courses. This is a two-semester requirement. • Experiential learning courses may not be taken concurrently in the same semester. • All students must take at least three credit hours of CSE 484 or ACO/CSE 499, and may choose to take all six credit hours as CSE 484 and/or ACO/CSE 499, if they desire. See academic advisor for questions. • Gather professional references.
Complete 2 courses: Upper Division Computing Elective	6	C	
Elective	3		
Term hours subtotal:	12		

Term 8 108 - 120 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ Upper Division Computing Capstone/Experiential Learning Requirement	3	C	• Completion of all major MAT/STP coursework (MAT 210, MAT 243, and STP 226) and the listed CSE or ACO prerequisites with a C or better is required prior to enrollment in the experiential learning courses. This is a two-semester requirement. • Experiential learning courses may not be taken concurrently in the same semester. Only one of ACO 482 or ACO 494 Industry Capstone Projects may apply for three out of the six credit hours. • All students must take at least three credit hours of CSE 484 or ACO/CSE 499, and may choose to take all six credit hours as CSE 484 and/or ACO/CSE 499, if they desire. See academic advisor for questions. • Apply for full-time career opportunities.
Complete 2 courses: Upper Division Computing Elective	6	C	
American Institutions (AMIT)	3		
Term hours subtotal:	12		

- ◦ Completion of all major MAT/STP coursework (MAT 210, MAT 243, and STP 226) and the listed CSE or ACO prerequisites with a C or better is required prior to enrollment in the experiential learning courses. This is a two-semester requirement.
  - ◦ Experiential learning courses may not be taken concurrently in the same semester. Only one of ACO 482 or ACO 494 Industry Capstone Projects may apply for three out of the six credit hours.
  - ◦ All students must take at least three credit hours of CSE 484 or ACO/CSE 499, and may choose to take all six credit hours as CSE 484 and/or ACO/CSE 499, if they desire. See academic advisor for questions.

Hide Course List(s)/Track Group(s)

Upper Division Computing Electives
ACO 321: Database Development & Applications
ACO 331: Network Forensics Analysis
ACO 351: Governance, Risk and Compliance
ACO 361: Secure Coding Concepts
ACO 394: Special Topics
ACO 420: Big Data Systems
ACO 423: Data Science
ACO 430: Wireless Networks and Security
ACO 431: Network Security
ACO 432: Distributed Systems
ACO 461: Security Operations
ACO 494: Special Topics
CPI 310: Web-Based Information Management Systems
CPI 350: Evaluation of Informatics Systems
CPI 360: Decision Making and Problem Solving
CSE 335: Principles of Mobile Application Development
CSE 365: Information Assurance
CSE 445: Distributed Software Development
CSE 446: Software Integration and Engineering
CSE 460: Software Analysis and Design
CSE 463: Introduction to Human Computer Interaction
CSE 494: Special Topics

Computing Capstone/Experiential Learning Requirement
ACO 482: Design Thinking for National Security
ACO 484: Internship
ACO 494: Industry Capstone Projects
ACO 499: Individualized Instruction
CSE 484: Internship
CSE 492: Honors Directed Study
CSE 493: Honors Thesis (L)
CSE 499: Individualized Instruction

Upper Division Communication Elective
COM 316: Gender and Communication (SOBE OR SB & C)
COM 317: Nonverbal Communication (SOBE OR SB)
COM 353: Professional Communication
COM 371: Language, Culture, and Communication (GCSI OR SB & C & G)
COM 3** Elective
COM 415: Risk Communication
COM 416: Gender and Race in the Media
COM 457: New Media
COM 459: Theory and Methods of Social Media Networks
COM 471: Global Media and Cultural Identity (GCSI OR G)
COM 477: Sport, Culture, and Discourses
COM 4** Elective

- **Total Hours:** 120
- **Upper Division Hours:** 45 minimum
- University Undergraduate Graduation Requirements

Notes:
Mathematics Placement Assessment score determines placement in first mathematics course.

General Studies designations listed next to courses on the major map were valid for the 2024 - 2025 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.