












2024 - 2025 Major Map

Applied Computing, BS

School/College: New College of Interdisciplinary Arts and Sciences
ASACOBBS

Term 1 0 - 16 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 ACO 101: Introduction to Computer Science (QTRS OR CS)	3	C	<ul style="list-style-type: none"> If a student scores 0-60 on the math placement test, they should complete MAT 117 in place of an elective in Term 1 as the prerequisite to MAT 210 in Term 2. ASU 101 or college-specific First-Year Seminar required of all first-year students. NEW 101 satisfies this requirement. IAS 300 (three credit hours) is required for all transfer students in New College. Select your Career Interest Community and play me3@ASU. Activate your Handshake account and build out your profile.
ENG 101 or ENG 102: First-Year Composition OR			
ENG 105: Advanced First-Year Composition OR	3	C	
ENG 107 or ENG 108: First-Year Composition			
NEW 101: The ASU New College Experience OR IAS 300: Career Strategies and Personal Resilience (L or SB)	1-3		
Humanities, Arts and Design (HUAD)	3		
Social and Behavioral Sciences (SOBE)	3		
Elective	3		
Term hours subtotal:	16-18		
Term 2 16 - 32 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 ACO 102: Object-Oriented Programming (QTRS OR CS)	3	C	<ul style="list-style-type: none"> Create a first draft resume. Join a student club or professional organization. Secure a part-time job or volunteer experience.
 MAT 210: Brief Calculus (MATH OR MA) OR MAT 251: Calculus for Life Sciences (MATH OR MA)	3	C	
ENG 101 or ENG 102: First-Year Composition OR			
ENG 105: Advanced First-Year Composition OR	3	C	
ENG 107 or ENG 108: First-Year Composition			
Scientific Thinking in Natural Sciences (SCIT)	4		
Elective	3		
 Complete ENG 101 OR ENG 105 OR ENG 107 course(s).			
Term hours subtotal:	16		
Term 3 32 - 48 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes
 ACO 201: Data Structures and Algorithms (QTRS OR CS)	3	C	<ul style="list-style-type: none"> Develop your research skills. Develop your professional skills. Interested in pre-professional pathways? Explore our pre-health and pre-law websites.
 MAT 243: Discrete Mathematical Structures	3	C	
Global Communities, Societies and Individuals (GCSI)	3		
Governance and Civic Engagement (CIVI)	3		
Scientific Thinking in Natural Sciences (SCIT)	4		
 Complete First-Year Composition requirement.			
Complete Mathematics (MATH) requirement.			
Term hours subtotal:	16		
Term 4 48 - 63 Credit Hours Critical course signified by 	Hours	Minimum Grade	Notes

❖ ACO 240: Introduction to Programming Languages	3	C	<ul style="list-style-type: none"> Explore an internship, an IGLE international experience, or ASU study abroad.
❖ STP 226: Elements of Statistics (QTRS OR CS)	3	C	
Humanities, Arts and Design (HUAD)	3		
Sustainability (SUST)	3		
Elective (PHI 103 recommended)	3		
Term hours subtotal:	15		
Term 5 63 - 78 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ ACO 320: Database Systems	3	C	<ul style="list-style-type: none"> Thinking about graduate school? Consider registering for a grad school test prep course and explore accelerated master's degrees. Develop your professional online presence.
★ ACO 330: Computer Networks	3	C	
American Institutions (AMIT)	3		
Upper Division Elective	3-0		
Elective	3		
Term hours subtotal:	15-12		
Term 6 78 - 93 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ ACO 350: Systems Programming (QTRS OR CS)	3	C	<ul style="list-style-type: none"> See academic advisor to discuss setting up capstone/experiential learning coursework. Use Handshake to research employment opportunities. Complete an in person or virtual practice interview.
Upper Division Applied Computing Elective	3	C	
Upper Division Global and Civic Engagement Requirement: satisfied through completion of 6 credits of upper-division courses with a Global Communities, Societies and Individuals (GCSI) or Governance and Civic Engagement (CIVI) designation, in addition to the courses used to meet the university General Studies requirements; or completion of 3 credits from an ASU-approved Global Education program. Adjustment to upper-division and elective hours is required if a lower-division Global Education course is used.	3	C	
Diversity Elective	3	C	
Liberal Arts Elective	3	C	
Term hours subtotal:	15		
Term 7 93 - 108 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes
★ Upper Division Applied Computing Capstone/Experiential Learning Requirement I	3	C	<ul style="list-style-type: none"> Completion of all major MAT/STP coursework (MAT 210, 243, and STP 226) and the ACO Core (101/102/201/240/320/330/350) with a C or better is required prior to enrollment in the experiential learning courses (ACO 484, ACO 494, ACO 499). 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 ACO 484 or ACO 499, and may choose to take all six credit hours as ACO 484 and/or ACO 499, if they desire. See academic advisor for questions. Gather professional references.
Upper Division Applied Computing Elective	3	C	
Upper Division Communication Elective	3	C	
Upper Division Ethics Elective	3	C	
Upper Division Liberal Arts Elective	3	C	
Term hours subtotal:	15		
Term 8 108 - 120 Credit Hours Necessary course signified by ★	Hours	Minimum Grade	Notes

★ Upper Division Applied Computing Capstone/Experiential Learning Requirement 2	3	C
Upper Division Applied Computing Elective	3	C
Upper Division Global and Civic Engagement Requirement: satisfied through completion of 6 credits of upper-division courses with a Global Communities, Societies and Individuals (GCSI) or Governance and Civic Engagement (CIVI) designation, in addition to the courses used to meet the university General Studies requirements; or completion of 3 credits from an ASU-approved Global Education program. Adjustment to upper-division and elective hours is required if a lower-division Global Education course is used.	3	C
Upper Division Liberal Arts Elective	3	C
Term hours subtotal:	12	

- Completion of all major MAT/STP coursework (MAT 210, 243, and STP 226) and the ACO Core (101/102/201/240/320/330/350) with a C or better is required prior to enrollment in the experiential learning courses (ACO 484, ACO 494, ACO 499). 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 ACO 484 or ACO 499, and may choose to take all six credit hours as ACO 484 and/or ACO 499, if they desire. See academic advisor for questions.
- Apply for [full-time career opportunities](#).

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

Upper Division Applied Computing Electives	Upper Division Applied Computing Capstone/Experiential Learning Requirement 1	Upper Division Applied Computing Capstone/Experiential Learning Requirement 2
ACO 321: Database Development & Applications	ACO 482: Design Thinking for National Security	ACO 484: Internship
ACO 331: Network Forensics Analysis	ACO 484: Internship	ACO 494: Applied Projects
ACO 351: Governance, Risk and Compliance	ACO 494: Applied Projects	ACO 499: Individualized Instruction
ACO 361: Secure Coding Concepts	ACO 494: Industry Capstone Projects	
ACO 394: Special Topics	ACO 499: Individualized Instruction	
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		
Upper Division Communication Elective	Upper Division Ethics Electives	Diversity Electives
COM 316: Gender and Communication (SOBE OR SB & C)	IAS 340: Bioethics (HUAD OR HU)	ASB 211: Women in Other Cultures ((HU or SB) & G)
COM 317: Nonverbal Communication (SOBE OR SB)	IAS 406: Moral Dilemmas (L or HU) or PHI 406: Moral Dilemmas (L or HU)	COM 263: Elements of Intercultural Communication (GCSI OR SB & C & G)
COM 353: Professional Communication	IAS 407: Environmental Philosophy and Policy (L or HU) or PHI 407: Environmental Philosophy and Policy (L or HU)	ENG 317: Cross-Cultural Writing ((L or HU) & G)

COM 371: Language, Culture, and Communication (GCSI OR SB & C & G)	IAS 409: Eco-Community Ethics (HU) or PHI 409: Eco-Community Ethics (HU)	POS 480: Global Justice (GCSI OR G) or SBS 480: Global Justice (GCSI OR G)
COM 415: Risk Communication	PHI 306: Applied Ethics (CIVI OR HU)	PSY 385: Psychology of Gender (SOBE OR SB)
COM 416: Gender and Race in the Media	PHI 360: Business and Professional Ethics (HUAD OR HU)	REL 390: Women, Gender and Religion (GCSI OR HU & G) or WST 390: Women, Gender and Religion (GCSI OR HU & G)
COM 457: New Media		SBS 301: Cultural Diversity ((L or SB) & C)
COM 459: Theory and Methods of Social Media Networks		WST 220: Gender, Media and Culture (HUAD OR HU & C)
COM 471: Global Media and Cultural Identity (GCSI OR G)		
COM 477: Sport, Culture, and Discourses		
Liberal Arts Electives		
AMS Elective		
ASB Elective		
COM Elective		
DST Elective		
ENG Elective		
ETH Elective		
HRC Elective		
HST Elective		
IAP Elective		
IAS Elective		
JHR Elective		
LAS Elective		
NEW Elective		
PAX Elective		
PHI Elective		
POS Elective		
PSY Elective		
REL Elective		
SBS Elective		
SOC Elective		
SPA Elective		
WST 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.