2018 - 2019 Major Map
Applied Computing, BS
School/College: New College of Interdisciplinary Arts and Sciences
Location: West campus

<table>
<thead>
<tr>
<th>Term 1 0 - 16 Credit Hours</th>
<th>Critical course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACO 101: Introduction to Computer Science (CS)</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEW 101: The ASU New College Experience</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Historical Awareness (H)</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics (MA) OR Elective</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Term hours subtotal:</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- An SAT, ACT, Accuplacer, IELTS, or TOEFL score determines placement into first-year composition courses.
- Mathematics Placement Assessment score determines placement in mathematics course. Student may elect to take an MA course if needed to prepare for MAT 210 in term 2.
- ASU 101 or college-specific equivalent First-Year Seminar required of all freshman students. NEW 101 satisfies this requirement.
- IAS 300 (3 credit hours) is required for all transfer students in place of NEW 101.
- Select your career interest area and play me3@ASU.

<table>
<thead>
<tr>
<th>Term 2 16 - 32 Credit Hours</th>
<th>Critical course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACO 102: Object-Oriented Programming (CS)</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT 210: Brief Calculus (MA)</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global Awareness (G)</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Science - Quantitative (SQ)</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete ENG 101 OR ENG 105 OR ENG 107 course(s).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Term hours subtotal:</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Explore interdisciplinary connections.

<table>
<thead>
<tr>
<th>Term 3 32 - 47 Credit Hours</th>
<th>Critical course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACO 201: Data Structures and Algorithms (CS)</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT 243: Discrete Mathematical Structures</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural Diversity in the U.S. (C)</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities, Arts and Design (HU)</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social-Behavioral Sciences (SB)</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete First-Year Composition requirement.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete Mathematics (MA) requirement.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Term hours subtotal:</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Develop your research skills.
### Term 4 47 - 62 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACO 240: Introduction to Programming Languages</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>STP 226: Elements of Statistics (CS)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>

- **Term hours subtotal:** 15

**Critical course signified by ♦**

- Humanities, Arts and Design (HU)                                      | 3     |               |       |
- Literacy and Critical Inquiry (L)                                      | 3     |               |       |
- Social-Behavioral Sciences (SB)                                       | 3     |               |       |

**Develop your professional online presence.**

### Term 5 62 - 75 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACO 320: Database Systems and Transaction Processing</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>ACO 330: Computer Networks</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>

- Natural Science - Quantitative (SQ) OR Natural Science - General (SG) | 4     |               |       |
- Upper Division Literacy and Critical Inquiry (L) OR IAS 300:          | 3     |               |       |
- Adult Career Development (L or SB)                                    |       |               |       |

**Term hours subtotal:** 13

**Necessary course signified by ★**

- Upper Division Applied Computing Elective                             | 3     | C             |       |
- Upper Division Communication Elective                                 | 3     | C             |       |
- Liberal Arts Elective                                                | 3     | C             |       |
- Elective                                                             | 3     |               |       |
- Complete Cultural Diversity in the U.S. (C) AND Global Awareness (G) AND Historical Awareness (H) course(s). |       |               |       |
- Complete ACO 320 AND ACO 330 course(s).                              |       |               |       |

**Use Handshake to research employment opportunities.**

### Term 6 75 - 90 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACO 350: Systems Programming (CS)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>
- Upper Division Applied Computing Elective                             | 3     | C             |       |
- Upper Division Communication Elective                                 | 3     | C             |       |
- Liberal Arts Elective                                                 | 3     | C             |       |
- Elective                                                             | 3     |               |       |

- Complete Cultural Diversity in the U.S. (C) AND Global Awareness (G) AND Historical Awareness (H) course(s). |       |               |       |
- Complete ACO 320 AND ACO 330 course(s).                              |       |               |       |

**Term hours subtotal:** 15

**Necessary course signified by ★**

- Upper Division Ethics and Diversity Elective                          | 3     | C             |       |
- Upper Division Liberal Arts Elective                                  | 3     | C             |       |
- Liberal Arts Elective                                                 | 3     | C             |       |

**Completion of ACO 320 and ACO 330 with a C or better is required to enroll in ACO 484 and ACO 499. ACO 484 and ACO 499 may not be taken concurrently, and is limited to a maximum of 3 hours per semester (six hours total in the major). Subject of study must include databases, networks or cyber-security; faculty approval required.**

### Term 7 90 - 105 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACO 484: Internship OR ACO 499: Individualized Instruction</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>
- Upper Division Applied Computing Elective                             | 3     | C             |       |
- Upper Division Ethics and Diversity Elective                          | 3     | C             |       |
- Upper Division Liberal Arts Elective                                  | 3     | C             |       |

**Term hours subtotal:** 15

**Necessary course signified by ★**

- Upper Division Liberal Arts Elective                                  | 3     | C             |       |

**Completion of ACO 320 and ACO 330 with a C or better is required to enroll in ACO 484 and ACO 499. ACO 484 and ACO 499 may not be taken concurrently, and is limited to a maximum of 3 hours per semester (six hours total in the major). Subject of study must include databases, networks or cyber-security; faculty approval required.**

### Term 8 105 - 120 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACO 484: Internship OR ACO 499: Individualized Instruction</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>
- Upper Division Applied Computing Elective                             | 3     | C             |       |
- Upper Division Liberal Arts Elective                                  | 3     | C             |       |
- Complete 2 courses:                                                  | 6     |               |       |
- Upper Division Elective                                               |       |               |       |

**Term hours subtotal:** 15

**Necessary course signified by ★**

- Upper Division Elective                                               |       |               |       |

**Completion of ACO 320 and ACO 330 with a C or better is required to enroll in ACO 484 and ACO 499. ACO 484 and ACO 499 may not be taken concurrently, and is limited to a maximum of 3 hours per semester (six hours total in the major). Subject of study must include databases, networks or cyber-security; faculty approval required.**
### Upper Division Applied Computing Electives

- ACO 321: Database Development & Applications
- ACO 331: Network Design
- ACO 351: Governance, Risk and Compliance
- ACO 361: Secure Coding Concepts
- ACO 394: Special Topics
- ACO 420: Big Data Systems
- ACO 421: Data Mining and Warehousing
- ACO 422: XML and Databases
- ACO 423: Data Science
- ACO 430: Wireless Networks
- ACO 431: Network Security
- ACO 432: Distributed Systems
- ACO 461: Security Operations
- ACO 494: Special Topics

### Upper Division Communication Elective

- COM 312: Communication, Conflict, and Negotiation
- COM 316: Gender and Communication (SB & C)
- COM 317: Nonverbal Communication
- COM 353: Professional Communication
- COM 371: Language, Culture, and Communication (SB & C & G)
- COM 400: Communication in Professions (HU & C)
- COM 416: Gender and Race in the Media
- COM 457: New Media
- COM 459: Theory and Methods of Social Media Networks
- COM 463: Intercultural Communication in a Global Context (SB & G)
- COM 471: Global Media and Cultural Identity (G)
- COM 477: Sport, Culture, and Discourses

### Upper Division Ethics and Diversity Elective

- IAP 464: Media and Diversity (HU & G)
- IAS 340: Bioethics (HU)
- IAS 406: Moral Dilemmas (L or HU) or PHI 406: Moral Dilemmas (L or HU)
- IAS 407: Environmental Philosophy and Policy (L or HU) or PHI 407: Environmental Philosophy and Policy (L or HU)
- IAS 409: Eco-Community Ethics (HU) or PHI 409: Eco-Community Ethics (HU)
- PHI 306: Applied Ethics (HU)
- PHI 360: Business and Professional Ethics (HU)

### Liberal Arts Electives

- AMS Elective
- ARS Elective
- ASB Elective
- COM Elective
- ECN 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
General Studies designations listed on the major map are current for the 2018 - 2019 academic year.

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 2018 - 2019 academic year.