## 2020 - 2021 Major Map
### Applied Computing, BS

**School/College:** New College of Interdisciplinary Arts and Sciences  
**Location:** West campus, ASU@Lake Havasu  
**ASACOBS**

### Term 1  - 16 Credit Hours

<table>
<thead>
<tr>
<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>
</tr>
</tbody>
</table>
| 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 |  |
| NEW 101-M: The ASU New College Experience | 1 | |  |
| Historical Awareness (H) | 3 | |  |
| Mathematics (MA) OR Elective | 3 | |  |
| Elective | 3 | |  |

**Term hours subtotal:** 16

- 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 in place of elective in Term 1 if needed to prepare for MAT 210 in term 2.
- ASU 101 or college-specific equivalent
- First-Year Seminar required of all first-year students. NEW 101 satisfies this requirement.
- Completion of both ACO 101 and ACO 102 with a C or better fulfills the New College Language and Cultures requirement.
- IAS 300 (3 credit hours) is required for all transfer students in place of NEW 101.
- Select your Career Interest Communities and play me3@ASU.
- Activate your Handshake account and build out your profile.

### Term 2  - 32 Credit Hours

<table>
<thead>
<tr>
<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>
</tr>
<tr>
<td>MAT 210: Brief Calculus (MA)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>
| 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 |  |
| Global Awareness (G) | 3 | |  |
| Natural Science - Quantitative (SQ) | | |  |

**Complete ENG 101 OR ENG 105 OR ENG 107 course(s).**

**Term hours subtotal:** 16

- Completion of both ACO 101 and ACO 102 with a C or better fulfills the New College Language and Cultures requirement.
- Create a first draft resume.
- Join a student club or professional organization.
- Secure a part-time job or volunteer experience

### Term 3  - 47 Credit Hours

<table>
<thead>
<tr>
<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>
</tr>
<tr>
<td>MAT 243: Discrete Mathematical Structures</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Cultural Diversity in the U.S. (C)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities, Arts and Design (HU)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social-Behavioral Sciences (SB)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Complete First-Year Composition requirement.**

**Complete Mathematics (MA) requirement.**

- Develop your research skills.
- Develop your professional skills.
- Build your professional connections - join the ASU Mentor Network
### Term 4 47 - 62 Credit Hours

<table>
<thead>
<tr>
<th>Critical course signified by</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><em>Explore an internship, an IGLE international experience, or ASU study abroad.</em></td>
</tr>
<tr>
<td>STP 226: Elements of Statistics (CS)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Humanities, Arts and Design (HU)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literacy and Critical Inquiry (L)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social-Behavioral Sciences (SB)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Term hours subtotal: 15

### Term 5 62 - 75 Credit Hours

<table>
<thead>
<tr>
<th>Necessary course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACO 320: Database Systems</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>
<tr>
<td>Natural Science - Quantitative (SQ) OR Natural Science - General (SG)</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Division Literacy and Critical Inquiry (L) OR IAS 300: Career Strategies and Personal Resilience (L or SB)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Term hours subtotal: 13

### Term 6 75 - 90 Credit Hours

<table>
<thead>
<tr>
<th>Necessary course signified by</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>
<tr>
<td>Upper Division Applied Computing Elective</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Upper Division Communication Elective</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Liberal Arts Elective</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete Cultural Diversity in the U.S. (C) AND Global Awareness (G) AND Historical Awareness (H) course(s).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete ACO 320 AND ACO 330 course(s).</td>
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</tbody>
</table>

Term hours subtotal: 15

### Term 7 90 - 105 Credit Hours

<table>
<thead>
<tr>
<th>Necessary course signified by</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><em>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.</em></td>
</tr>
<tr>
<td>Upper Division Applied Computing Elective</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Upper Division Ethics Elective</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Upper Division Liberal Arts Elective</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Diversity Elective</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>

Term hours subtotal: 15

### Term 8 105 - 120 Credit Hours

<table>
<thead>
<tr>
<th>Necessary course signified by</th>
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<th>Minimum Grade</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>ACO 484: Internship OR ACO 499: Individualized Instruction</td>
<td>3</td>
<td>C</td>
<td><em>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</em></td>
</tr>
<tr>
<td>Upper Division Applied Computing Elective</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Upper Division Liberal Arts Elective</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>

Term hours subtotal: 15
Complete 2 courses:
Upper Division Elective

Term hours subtotal: 15

of 3 hours per semester (six hours total in the major). Subject of study must include databases, networks or cyber-security; faculty approval required.

- Apply for full-time career opportunities.

### Upper Division Applied 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 421: Data Mining and Warehousing
- 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 Electives
- COM 316: Gender and Communication (SB & C)
- COM 317: Nonverbal Communication (SB)
- COM 353: Professional Communication
- COM 371: Language, Culture, and Communication (SB & C & G)
- 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 (G)
- COM 477: Sport, Culture, and Discourses

### Upper Division Ethics Electives
- 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)

### Diversity Electives
- ASB 211: Women in Other Cultures ((HU or SB) & G)
- COM 263: Elements of Intercultural Communication (SB & C & G)
- ENG 317: Cross-Cultural Writing ((L or HU) & G)
- POS 480: Global Justice (G) or SBS 480: Global Justice (G)
- PSY 385: Psychology of Gender (SB)
- REL 390: Women, Gender and Religion (HU & G) or WST 390: Women, Gender and Religion (HU & G)
- SBS 301: Cultural Diversity ((L or SB) & C)
- WST 220: Gender, Media and Culture (HU & C)

### 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

Hide Course List(s)/Track Group(s)
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 2020-2021 academic year.

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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
Total College Residency Hrs: 12 minimum

General University Requirements Legend

General Studies Core Requirements:
- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Arts and Design (HU)
- Social-Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)