## 2021 - 2022 Major Map

### Biomedical Informatics, BS

**School/College:** College of Health Solutions  
**Location:** Downtown Phoenix campus, Tempe campus  
**ESBMIBS**

### Term 1 - 14 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 181: General Biology I (SQ)</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| CHS 100: Optimizing Your Health and Performance (SB) OR CHS 300: An Exploration of Well-Being (SB) | 3     | C             | • Students who test into MAT 251 can take MAT 170 in Term 1 as a refresher or take an elective course instead.  
| CHS 101: The ASU Experience for Health Solutions Students             | 1     |               |  
| ENG 101: First-Year Composition or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107: First-Year Composition | 3     | C             | • ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.  
| Elective (MAT 170 recommended)                                        |       |               | • Students who enter as freshmen must complete CHS 100; students who enter with more than 45 hours should complete CHS 300 instead.  

**Term hours subtotal:** 14

### Term 2 - 14 - 30 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 182: General Biology II (SG)</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMI 110: Introduction to Python</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>MAT 251: Calculus for Life Sciences (MA)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>BMI 201: Introduction to Clinical Informatics</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>
| ENG 101: First-Year Composition or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107: First-Year Composition | 3     | C             | • Join a student club or professional organization.  
|                                                                     |       |               | • Create a first draft resume.  
|                                                                     |       |               | • Select your Career Interest Communities and play me3.  

**Term hours subtotal:** 16

### Term 3 - 30 - 46 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 113: General Chemistry I (SQ)</td>
<td>4</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>BMI 210: Data Structures and Algorithms in Python</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>BMI 102: Introduction to Population Health Informatics</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>STP 231: Statistics for Life Science (CS)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>

**Complete Mathematics (MA) requirement.**  

**Term hours subtotal:** 16

### Term 4 - 46 - 61 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI 221: Knowledge Representation for Biomedical Informatics</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>

**Term hours subtotal:** 16

- **Term 1:** Critical course signified by ▶
- **Term 2:** Critical course signified by ▶
- **Term 3:** Critical course signified by ▶
- **Term 4:** Critical course signified by ▶
BMI 211: Modeling Biomedical Decisions 3 C
BMI 310: App Development for Clinical and Population Health OR
CSE 335: Principles of Mobile Application Development 3 C
Humanities, Arts and Design (HU) AND Historical Awareness (H) 3 C
Elective 3 C

Complete BMI 102 AND BMI 201 course(s).

Term hours subtotal: 15

Term 5 61 - 76 Credit Hours Necessary course signified by ⭐ Hours Minimum Grade

🌟 BIO 340: General Genetics 4 C
BMI 311: Modeling Biomedical Knowledge 3 C
BMI 332: Team Dynamics for Healthcare IT Projects 3 C
Social-Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) 3 C
Upper Division Elective 2 C

Term hours subtotal: 15

Term 6 76 - 91 Credit Hours Necessary course signified by ⭐ Hours Minimum Grade

🌟 BMI 312: Modeling Biomedical Data 3 C
BMI 330: Topics in Translational Bioinformatics 3 C
BMI 410: Database Management in Health Care 3 C
BMI 440: Software Engineering for Biomedical Informatics OR
CSE 360: Introduction to Software Engineering 3 C
Humanities, Arts and Design (HU) AND Global Awareness (G) 3 C

Complete Cultural Diversity in the U.S. (C) AND Global Awareness (G) AND Historical Awareness (H) course(s).

Term hours subtotal: 15

Term 7 91 - 106 Credit Hours Necessary course signified by ⭐ Hours Minimum Grade

🌟 BMI 461: Advanced Topics in Biomedical Informatics I 3 C
BMI 482: Capstone I (L) OR CHS 492: Honors Directed Study 3 C
BMI 484: Internship 3 C
Upper Division Humanities, Arts and Design (HU) OR Upper Division Social-Behavioral Sciences (SB) 3 C
Elective 3 C

Term hours subtotal: 15

Term 8 106 - 120 Credit Hours Necessary course signified by ⭐ Hours Minimum Grade

🌟 BMI 404: Clinical Environments 3 C
BMI 483: Capstone II (L) OR CHS 493: Honors Thesis (L) 3 C
Literacy and Critical Inquiry (L) 3 C
Complete 2 courses:
Elective 5 C

Term hours subtotal: 14

- Update your resume
- Thinking about graduate school? Consider registering for a grad school test prep course
- Use Handshake to research employment opportunities
- Complete an in person or virtual practice interview
- Apply for full-time career opportunities
- Barrett Honors College students who take CHS 492 and CHS 493 will need a Literacy and Critical Inquiry course in Term 8. Non-Barrett students who take BMI 482 and BMI 483 may take an elective course instead.
Notes:

- First-Year Composition: All students are placed in ENG 101 unless submission of SAT, ACT, Accuplacer, IELTS, or TOEFL score, or college-level transfer credit or test credit equivalent to ASU's first-year composition course(s), determine otherwise. Students on Polytechnic, Downtown Phoenix and West Campuses are encouraged to complete the Directed Self-Placement survey to choose the first-year composition option they believe best suits their needs. Visit: https://cisa.asu.edu/DSP
- Mathematics Placement Assessment score determines placement in first mathematics course.

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)

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 2021 - 2022 academic year.