# 2022 - 2023 Major Map
## Construction Management and Technology, BS

**School/College:** Ira A. Fulton Schools of Engineering  
**Location:** Tempe  
**ESC0NMGTB5**

### Term 1 0 - 15 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>FMT 100: Introduction to Construction</td>
<td>2</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>FMT 101: Construction and Culture: a Built Environment (HU &amp; H)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>FMT 252: Building Construction Methods, Materials, and Equipment</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>MATH 170: Precalculus (MA)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>ASU 101-CON: The ASU Experience</td>
<td>1</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>
</tr>
<tr>
<td><strong>Minimum 2.00 GPA ASU Cumulative.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Term hours subtotal: 15

### Term 2 15 - 30 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>FMT 244: Working Drawing Analysis</td>
<td>2</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>FMT 225: Public Speaking (L)</td>
<td>3</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>
</tr>
<tr>
<td>PHYS 111: General Physics (SQ)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>PHYS 113: General Physics Laboratory (SQ)</td>
<td>1</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Humanities, Arts and Design (HU) AND Cultural Diversity in the U.S. (C)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Minimum 2.00 GPA ASU Cumulative.</strong></td>
<td></td>
<td></td>
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</tbody>
</table>

Term hours subtotal: 15

### Term 3 30 - 45 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>FMT 221: Applied Statics</td>
<td>2</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>FMT 251: Microcomputer Applications for Construction</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>FMT 243: Heavy Construction Equipment, Methods and Materials</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>STP 226: Elements of Statistics (CS)</td>
<td>3</td>
<td></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><strong>Minimum 2.00 GPA ASU Cumulative.</strong></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

- ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students and should be taken the first semester.  
- Prep for success using the First-Year Student Guide.  
- Join a Fulton community.  
- Explore engineering and technical professions.

- Create a Handshake profile.  
- Get involved with EPICS, the Generator Labs, and the Fulton Start-Up Center.  
- Complete ENG 101 OR ENG 105 OR ENG 107 course(s).  
- Prep for success using the Sophomore Guide.
Complete Mathematics (MA) requirement.

<table>
<thead>
<tr>
<th>Term 45 - 59 Credit Hours</th>
<th>Critical course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CON 223: Strength of Materials</td>
<td>2</td>
<td>C</td>
<td>• Pursue an undergraduate research experience.</td>
<td></td>
</tr>
<tr>
<td>CON 271: Construction Safety</td>
<td>3</td>
<td>C</td>
<td>• Apply for internships.</td>
<td></td>
</tr>
<tr>
<td>CON 241: Surveying</td>
<td>3</td>
<td>C</td>
<td>• Attend career fairs and events.</td>
<td></td>
</tr>
<tr>
<td>CON 345: Mechanical Systems</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECN 212: Microeconomic Principles (SB)</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Term hours subtotal: 15

<table>
<thead>
<tr>
<th>Summer 4 59 - 60 Credit Hours</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CON 296: Summer Field Internship</td>
<td>1</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>

Term hours subtotal: 1

<table>
<thead>
<tr>
<th>Term 5 60 - 74 Credit Hours</th>
<th>Necessary course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CON 273: Electrical Construction Fundamentals and Project Management</td>
<td>3</td>
<td>C</td>
<td>• Network at student organization competitions or professional societies.</td>
<td></td>
</tr>
<tr>
<td>CON 383: Construction Estimating</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>CON 453: Construction Technology</td>
<td>3</td>
<td></td>
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</table>

Term hours subtotal: 14

<table>
<thead>
<tr>
<th>Term 6 74 - 89 Credit Hours</th>
<th>Necessary course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CON 495: Construction Planning and Scheduling (CS)</td>
<td>3</td>
<td></td>
<td>• Research and prepare for graduate school.</td>
<td></td>
</tr>
<tr>
<td>CON 424: Structural Design</td>
<td>3</td>
<td></td>
<td>• Apply for an engineering 4+1 program.</td>
<td></td>
</tr>
<tr>
<td>CON 448: Sustainable Construction</td>
<td>3</td>
<td></td>
<td>• Develop a professional profile online.</td>
<td></td>
</tr>
<tr>
<td>MGT 380: Management and Strategy for Nonmajors</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Division Construction Elective</td>
<td>3</td>
<td></td>
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</tbody>
</table>

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

Term hours subtotal: 15

<table>
<thead>
<tr>
<th>Summer 6 89 - 90 Credit Hours</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CON 484: Internship</td>
<td>1</td>
<td></td>
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</tbody>
</table>

Term hours subtotal: 1

<table>
<thead>
<tr>
<th>Term 7 90 - 105 Credit Hours</th>
<th>Necessary course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CON 455: Construction Project Management II</td>
<td>3</td>
<td></td>
<td>• Students must have a minimum 2.50 GPA in order to take LES 305.</td>
<td></td>
</tr>
<tr>
<td>CON 487: Project Controls</td>
<td>3</td>
<td></td>
<td>• Use Handshake to apply for full-time positions.</td>
<td></td>
</tr>
<tr>
<td>Upper Division Construction Elective</td>
<td>3</td>
<td></td>
<td>• Complete an in person or virtual practice interview.</td>
<td></td>
</tr>
</tbody>
</table>

Upper Division Humanities, Arts and Design (HU) OR Upper Division Social-Behavioral Sciences (SB) AND Global Awareness (G)

Term hours subtotal: 15

<table>
<thead>
<tr>
<th>Term 8 105 - 120 Credit Hours</th>
<th>Necessary course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
</table>
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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CON 491: Construction Project Capstone</td>
<td>3</td>
</tr>
<tr>
<td>CON 496: Construction Contract Administration (L)</td>
<td>3</td>
</tr>
<tr>
<td>ECN 211: Macroeconomic Principles (SB)</td>
<td>3</td>
</tr>
<tr>
<td>LES 305: Business Law and Ethics for Managers</td>
<td>3</td>
</tr>
<tr>
<td>Upper Division Construction Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Term hours subtotal: 15

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

Construction Elective

- CON 343: Advanced Heavy Equipment Operations
- CON 384: Environmental Aspects of Heavy Construction
- CON 446: Marketing for Construction
- CON 450: Geotechnical Applications for Construction
- CON 454: Trenchless Construction Methods
- CON 457: Principles of Leadership for Project Managers
- CON 483: Advanced Building Estimating
- CON 486: Heavy Construction Estimating
- CON 488: Heavy Construction Earthworks
- CON 394: Special Topics
- CON 494: Special Topics

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

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 2022 - 2023 academic year.