# 2018 - 2019 Major Map

## Engineering, BSE

School/College: Ira A. Fulton Schools of Engineering  
Location: Polytechnic campus  
TSEGRBSE

<table>
<thead>
<tr>
<th>Term 1</th>
<th>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>ASU 101-TPS: The ASU Experience</td>
<td>1</td>
<td></td>
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</tr>
<tr>
<td>EGR 101: Foundations of Engineering Design Project I</td>
<td>3</td>
<td>C</td>
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<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>
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<tr>
<td>MAT 265: Calculus for Engineers I (MA)</td>
<td>3</td>
<td>C</td>
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<tr>
<td>Humanities, Arts and Design (HU) AND Historical Awareness (H)</td>
<td>3</td>
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<tr>
<td>Social-Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C)</td>
<td>3</td>
<td></td>
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</tbody>
</table>

Term hours subtotal: 16

- ASU 101 is required of all freshman students; FSE 394 is required for all new transfer students.
- An SAT, ACT, Accuplacer, IELTS, or TOEFL score determines placement into first-year composition courses.
- Mathematics Placement Assessment score determines placement in mathematics course.
- Students must choose a concentration from the following areas: Automotive Systems, Electrical Systems, Mechanical Engineering, or Robotics. Upon choosing a concentration, students will be moved into that appropriate degree program.
- Prep for success using the Freshman Guide.
- Join a Fulton community.
- Explore engineering and technical professions.

<table>
<thead>
<tr>
<th>Term 2</th>
<th>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>EGR 102: Foundations of Engineering Design Project II</td>
<td>3</td>
<td>C</td>
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<tr>
<td>EGR 104: Critical Inquiry in Engineering (L)</td>
<td>3</td>
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<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>
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<tr>
<td>CHM 113: General Chemistry I (SQ)</td>
<td>4</td>
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<tr>
<td>MAT 266: Calculus for Engineers II (MA)</td>
<td>3</td>
<td>C</td>
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</tbody>
</table>

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

Complete MAT 265 course(s).

Term hours subtotal: 16

- Students must choose a concentration from the following areas: Automotive Systems, Electrical Systems, Mechanical Engineering, or Robotics. Upon choosing a concentration, students will be moved into that appropriate degree program.
- Create a Handshake profile.
- Get involved with EPICS, the Generator Labs, and the Fulton Start-Up Center.

<table>
<thead>
<tr>
<th>Term 3</th>
<th>32 - 48 Credit Hours</th>
<th>Critical course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 201: Use-Inspired Design Project I</td>
<td>3</td>
<td>C</td>
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<tr>
<td>EGR 216: Engineering Electrical Fundamentals</td>
<td>3</td>
<td>C</td>
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<tr>
<td>EGR 218: Materials and Manufacturing Processes</td>
<td>3</td>
<td>C</td>
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<tr>
<td>MAT 267: Calculus for Engineers III (MA)</td>
<td>3</td>
<td>C</td>
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<tr>
<td>PHY 121: University Physics I: Mechanics (SQ)</td>
<td>3</td>
<td>C</td>
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<tr>
<td>PHY 122: University Physics Laboratory I (SQ)</td>
<td>1</td>
<td>C</td>
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</tbody>
</table>

Complete MAT 266 course(s).

Complete Mathematics (MA) requirement.

Term hours subtotal: 16

- Students must choose a concentration from the following areas: Automotive Systems, Electrical Systems, Mechanical Engineering, or Robotics. Upon choosing a concentration, students will be moved into that appropriate degree program.
- Prep for success using the Sophomore Guide.
- Consult the Resume, Presentation, and Resource Library for tips on how to create a technical resume, job shadow, do informational interviews and mentor with alumni.
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.

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**Term 4 - 63 Credit Hours**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 202: Use-Inspired Design Project II</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>EGR 217: Engineering Mechanics Fundamentals</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>EGR 219: Computational Modeling of Engineering Systems</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>EGR 280: Engineering Statistics (CS)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>MAT 275: Modern Differential Equations (MA)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Complete EGR 216 AND EGR 217 AND EGR 218 AND EGR 219 course(s).</td>
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<td></td>
</tr>
<tr>
<td>Complete MAT 267 course(s).</td>
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<tr>
<td>Milestone: Selection of Engineering concentration</td>
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</table>

**Term hours subtotal:** 15

- Students must choose a concentration from the following areas: Automotive Systems, Electrical Systems, Mechanical Engineering, or Robotics. Upon choosing a concentration, students will be moved into that appropriate degree program.
- Pursue an undergraduate research experience.
- Apply for internships.
- Attend career fairs and events.

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**Total Hours:** 63

- **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

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**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)

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