This form is intended to serve as a helpful worksheet to ensure you will complete all of the requirements for the Engineering major. You do not need to submit the form as part of your Sophomore Plan, but your advisor may ask to go over it with you during your advising meeting.

**Important notes:**

- All courses taken to satisfy an Engineering major requirement must be taken for a grade, except for those taken during the first semester at Swarthmore.

- Students interested in off-campus study should be aware that Engineering classes taught at other institutions typically transfer in at 0.75 credits unless they have a lab component.

1. List the semester in which you will be taking (or have taken) your seven core courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGR 006</td>
<td>Spring</td>
</tr>
<tr>
<td>ENGR 011</td>
<td>Fall</td>
</tr>
<tr>
<td>ENGR 012</td>
<td>Spring</td>
</tr>
<tr>
<td>ENGR 014</td>
<td>Fall</td>
</tr>
<tr>
<td>*ENGR 015</td>
<td>Fall</td>
</tr>
<tr>
<td>ENGR 041</td>
<td>Fall</td>
</tr>
<tr>
<td>ENGR 090</td>
<td>Spring 2022</td>
</tr>
</tbody>
</table>

* Either ENGR 015 or 019 may be taken as a core course. If both are taken, one may count as an elective.

2. List the semester in which you will be taking (or have taken) your eight required credits of math and science, and provide course numbers where appropriate.

<table>
<thead>
<tr>
<th>Math/Course</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>*MATH 015:</td>
<td></td>
</tr>
<tr>
<td>*MATH 025:</td>
<td></td>
</tr>
<tr>
<td>*MATH 033, 034, or 035:</td>
<td></td>
</tr>
<tr>
<td>*MATH 043 or 044:</td>
<td></td>
</tr>
<tr>
<td>Fifth MATH:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS ___</td>
<td></td>
</tr>
<tr>
<td>PHYS ___</td>
<td></td>
</tr>
<tr>
<td>BIOL ___ or CHEM ___</td>
<td></td>
</tr>
<tr>
<td>Fourth science:</td>
<td></td>
</tr>
<tr>
<td>Fifth science:</td>
<td></td>
</tr>
</tbody>
</table>

* You must have either placement or credit for each line of MATH courses marked with an asterisk above. If you received placement but not credit, you still need a total of eight credits to satisfy the math/science requirement.

3. On the next page, check the boxes for the Engineering courses you plan to take in the next two years. Including your seven core courses, you should have a total of twelve credits in Engineering.
DEPARTMENT OF ENGINEERING
ANTICIPATED COURSE OFFERINGS
FALL 2020 – SPRING 2021

Offerings with dashes (\([-\]) do not count towards the 12 required courses for the Engineering major, nor the 5 required courses (2 or 3 core and 2 or 3 electives) for the minor.

Several faculty members (Delano, Macken, McGarity, Zucker) are currently scheduled to go on sabbatical during the 2021-2022 academic year, leading to a reduced number of electives offered. Should the department be able to hire leave replacement faculty, additional electives will be added.

<table>
<thead>
<tr>
<th>FALL 2020</th>
<th>SPRING 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>([-] ENGR 007: Art of Engineering of Structures</td>
<td>([-] ENGR 010: Fundamentals of Food Engr.</td>
</tr>
<tr>
<td>[ ] ENGR 011: Electrical Circuit Analysis</td>
<td>[ ] ENGR 006: Mechanics</td>
</tr>
<tr>
<td>[ ] ENGR 015: Digital &amp; Embedded Systems</td>
<td>[ ] ENGR 012: Linear Physical Systems Analysis</td>
</tr>
<tr>
<td>[ ] ENGR 019: Numerical Methods</td>
<td>[ ] ENGR 014: Experimentation for Engr. Design</td>
</tr>
<tr>
<td>[ ] ENGR 028: Mobile Robotics</td>
<td>[ ] ENGR 025: Computer Architecture</td>
</tr>
<tr>
<td>[ ] ENGR 041: Thermofluid Mechanics</td>
<td>[ ] ENGR 027: Computer Vision</td>
</tr>
<tr>
<td>[ ] ENGR 053: Inclusive Engineering Design</td>
<td>[ ] ENGR 058: Control Theory &amp; Design</td>
</tr>
<tr>
<td>[ ] ENGR 057: Operations Research</td>
<td>[ ] ENGR 066: Environmental Systems</td>
</tr>
<tr>
<td>[ ] ENGR 063: Water Quality &amp; Pollution Ctrl.</td>
<td>[ ] ENGR 081: Thermal Energy Conversion</td>
</tr>
<tr>
<td>[ ] ENGR 075: Electromagnetic Theory I</td>
<td>[ ] ENGR 091: Biomedical Signals</td>
</tr>
<tr>
<td>[ ] ENGR 084: Heat Transfer</td>
<td>[ ] Other: ____________________________</td>
</tr>
<tr>
<td>[ ] Other: ____________________________</td>
<td>[ ] Other: ____________________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FALL 2021</th>
<th>SPRING 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ] ENGR 011: Electrical Circuit Analysis</td>
<td>[ ] ENGR 006: Mechanics</td>
</tr>
<tr>
<td>[ ] ENGR 015: Digital &amp; Embedded Systems</td>
<td>[ ] ENGR 012: Linear Physical Systems Analysis</td>
</tr>
<tr>
<td>[ ] ENGR 019: Numerical Methods</td>
<td>[ ] ENGR 014: Experimentation for Engr. Design</td>
</tr>
<tr>
<td>[ ] ENGR 035: Solar Energy Systems</td>
<td>[ ] ENGR 056: Modeling and Optimization</td>
</tr>
<tr>
<td>[ ] ENGR 041: Thermofluid Mechanics</td>
<td>[ ] ENGR 062: Structural Design</td>
</tr>
<tr>
<td>[ ] ENGR 060: Structural Analysis</td>
<td>[ ] ENGR 086: Dynamics of Mechanical Systems</td>
</tr>
<tr>
<td>[ ] ENGR 061: Geotechnical Engineering</td>
<td>[X] ENGR 090: Senior Design</td>
</tr>
<tr>
<td>[ ] ENGR 072: Electronic Circuit Applications</td>
<td>[ ] Other: ____________________________</td>
</tr>
<tr>
<td>[ ] ENGR 078: Communications Systems</td>
<td>[ ] Other: ____________________________</td>
</tr>
<tr>
<td>[ ] Other: ____________________________</td>
<td>[ ] Other: ____________________________</td>
</tr>
</tbody>
</table>