

# ENGINEERING COURSE OF STUDY

Spring 2020: Updated February 5, 2020

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:

ENGR 006	Spring _____		ENGR 011	Fall _____
ENGR 012	Spring _____		ENGR 014	Fall _____
*ENGR 015	Fall _____	<b>OR</b>	*ENGR 019	_____
**ENGR 041	Fall _____		ENGR 090	Spring 2022 _____

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

\*\* *ENGR 041 requires ENGR 014 as a prerequisite course.*

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.

*MATH 015: _____	PHYS _____
*MATH 025: _____	PHYS _____
*MATH 033, 034, or 035: _____	BIOL _____ or CHEM _____
*MATH 043 or 044: _____	Fourth science: _____
Fifth MATH: _____	Fifth science: _____

\* *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.

FALL 2020	SPRING 2021
[-] ENGR 007: Art of Engineering of Structures <input type="checkbox"/> ENGR 011: Electrical Circuit Analysis <input type="checkbox"/> ENGR 015: Digital & Embedded Systems <input type="checkbox"/> ENGR 019: Numerical Methods <input type="checkbox"/> ENGR 028: Mobile Robotics <input type="checkbox"/> ENGR 041: Thermofluid Mechanics <input type="checkbox"/> ENGR 053: Inclusive Engineering Design <input type="checkbox"/> ENGR 057: Operations Research <input type="checkbox"/> ENGR 059: Mechanics of Solids <input type="checkbox"/> ENGR 063: Water Quality & Pollution Ctrl. <input type="checkbox"/> ENGR 075: Electromagnetic Theory I <input type="checkbox"/> ENGR 084: Heat Transfer <input type="checkbox"/> Other: _____	[-] ENGR 010: Fundamentals of Food Engr. <input type="checkbox"/> ENGR 006: Mechanics <input type="checkbox"/> ENGR 012: Linear Physical Systems Analysis <input type="checkbox"/> ENGR 014: Experimentation for Engr. Design <input type="checkbox"/> ENGR 025: Computer Architecture <input type="checkbox"/> ENGR 027: Computer Vision <input type="checkbox"/> ENGR 058: Control Theory & Design <input type="checkbox"/> ENGR 066: Environmental Systems <input type="checkbox"/> ENGR 073: Physical Electronics <input type="checkbox"/> ENGR 081: Thermal Energy Conversion <input type="checkbox"/> ENGR 091: Biomedical Signals <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____

FALL 2021	SPRING 2022
[-] ENGR 003: Problems in Technology <input type="checkbox"/> ENGR 011: Electrical Circuit Analysis <input type="checkbox"/> ENGR 015: Digital & Embedded Systems <input type="checkbox"/> ENGR 019: Numerical Methods <input type="checkbox"/> ENGR 035: Solar Energy Systems <input type="checkbox"/> ENGR 041: Thermofluid Mechanics <input type="checkbox"/> ENGR 060: Structural Analysis <input type="checkbox"/> ENGR 061: Geotechnical Engineering <input type="checkbox"/> ENGR 072: Electronic Circuit Applications <input type="checkbox"/> ENGR 078: Communications Systems <input type="checkbox"/> Other: _____	[-] ENGR 010: Fundamentals of Food Engr. <input type="checkbox"/> ENGR 006: Mechanics <input type="checkbox"/> ENGR 012: Linear Physical Systems Analysis <input type="checkbox"/> ENGR 014: Experimentation for Engr. Design <input type="checkbox"/> ENGR 056: Modeling and Optimization <input type="checkbox"/> ENGR 062: Structural Design <input type="checkbox"/> ENGR 086: Dynamics of Mechanical Systems <input checked="" type="checkbox"/> ENGR 090: Senior Design <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____