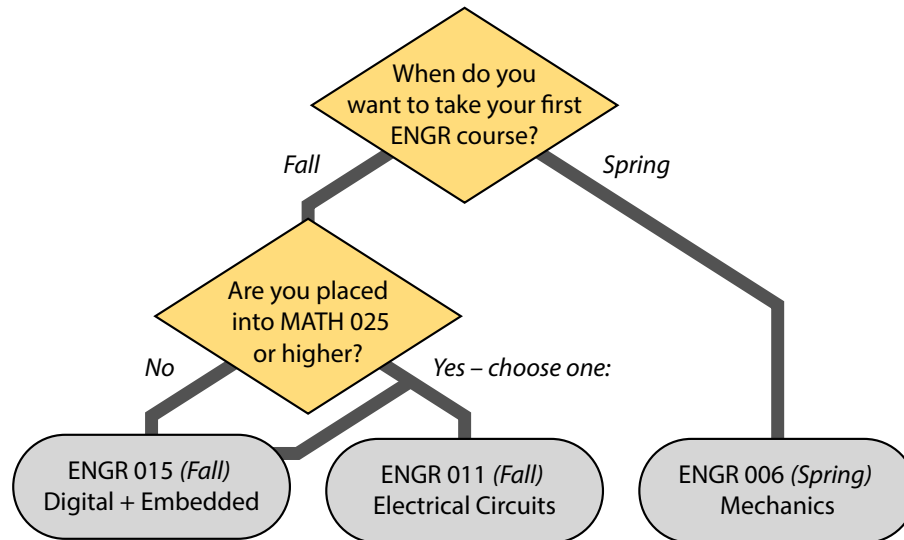


What Engineering courses should I sign up for in my first year?

Students eager to try out Engineering at Swarthmore have several entry points into the major, including two in the Fall semester, as shown in this flowchart:



Regardless of the courses you choose, we recommend that all students interested in Engineering as a potential major speak with an advisor in the department before signing up for classes.

Frequently Asked Questions

Q: What if I'm not sure Engineering is the right major for me?

A: In that case, we definitely recommend taking an ENGR course your first semester! The advice we give all prospective Engineers is to *pretend you're a major until you decide you're not*. It's much easier to switch out of Engineering than it is to join late.

Q. What if I don't have room in my fall schedule for an Engineering course?

A. No problem! However, we do recommend that all prospective majors take at least one class in the major in their first year. Most first-year Engineers take ENGR 006 in the spring, but you may also be eligible to take ENGR 019 – check with your engineering advisor.

Q. Can I double-major in Engineering and something else?

A. Yes – in fact, approximately 40% of Engineering majors graduate with another major as well. An additional 30% or so end up with a minor outside of Engineering.

Q. Do Engineers study abroad (in non-pandemic years)?

A. Yes, our department has affiliations with a long-running study abroad program in South Africa, and Engineering majors have studied in many other locations from Perú to Australia.

Q. Can Engineers be pre-med?

A. Yes – if you are interested in doing so, you should schedule an appointment with Gigi Simeone, the Health Sciences Advisor, before you sign up for classes.

Example pathways through the Engineering major

The schedules below are based on actual courses of study of recent Engineering graduates:

Student A: Environmental focus			Student B: Junior spring abroad, EE focus			Student C: Computer science double-major		
Course	Name	Dist	Course	Name	Dist	Course	Name	Dist
AP	MATH 015	Elem Single Variable Calculus						
F1	ENGR 011	Electrical Circuit Analysis	MATH 015	Elem Single Variable Calculus		ENGR 015	Digital & Embedded Systems	
	MATH 026	AdvTops: Single Vari Calculus	PHYS 003	General Physics I		MATH 015	Elem Single Variable Calculus	
	PHYS 003	General Physics I	PHIL 007B	FYS:Plato and Socrates	HU, W	PHYS 003	General Physics I	
	ENGL 009K	FYS: The Image of the City	GMST 001	Intensive Elementary German	HU	SOAN 004B	FYS:Intro-ContemSocThought	SS
S1	ENGR 006	Mechanics	ENGR 006	Mechanics		ENGR 006	Mechanics	
	PHYS 004	General Physics II	MATH 025	FurtherTops:Single VarCalculus		MATH 025	FurtherTops:Single VarCalculus	
	PHIL 001	Intro: Truth & Desire	PHYS 004	General Physics II		PHYS 004	General Physics II	
	ANTH 001D	FYS: Counterculture	GMST 002	Intensive Elementary German	HU	ARTH 002	Western Art	HU
F2	ENGR 035	Solar Energy Systems	ENGR 011	Electrical Circuit Analysis		ENGR 011	Electrical Circuit Analysis	
	MATH 033	Basic Several Vari Calculus	ENGR 015	Digital & Embedded Systems		MATH 033	Basic Several Vari Calculus	
	CHEM 010	General Chemistry	MATH 027	Linear Algebra		CHEM 010	General Chemistry	
	ENGL 052A	Core: US Fiction, 1900-1950	ECON 001	Introduction to Economics	SS	CPSC 021	Intro to Computer Science	
S2	ENGR 014	Experiment for Engr Design	ENGR 012	Linear Physical Syst Analysis		ENGR 012	Linear Physical Syst Analysis	
	ENGR 019	Numerical Methods	ENGR 014	Experiment for Engr Design	W	ENGR 014	Experiment for Engr Design	
	MATH 043	Math.Methods & Diff.Equations	MATH 034	Several Variable Calculus		MATH 043	Basic Differential Equations	
	ENVS 001	Intro to Environmental Studies	CPSC 021	Intro to Computer Science		CPSC 035	Data Structures and Algorithms	
F3	ENGR 057	Operations Research	ENGR 041	Thermofluid Mechanics		ENGR 041	Thermofluid Mechanics	
	MATH 027	Linear Algebra	ENGR 075	Electromagnetic Theory		ENGR 028	Mobile Robotics	
	GMST 003	Intensive Intermed. German	CHEM 010	Fdns of Chemical Principles		CPSC 031	Intro to Computer Systems	
	CPSC 021	Intro to Computer Science	MATH 043	Basic Differential Equations		LING 020	Natural Language Processing	SS
S3	ENGR 012	Linear Physical Syst Analysis	ENGR XXX	Control Engineering		ENGR 027	Computer Vision	
	ENGR 066	Environmental Systems	ENGR XXX	Digital Signal Processing		ENGR 058	Control Theory and Design	
	ENGR 062	Structural Design	ENVS XXX	Globalization, Eviro, Society		CPSC 044	Database Systems	
	SOAN 020	Race, Gender, Class, and Env.	ENVS XXX	Indp Stdy: Effects of Wind		ENGL 046	Tolkien & Pullman: Lit Roots	HU
F4	ENGR 041	Thermofluid Mechanics	ENGR 072	Electronic Circuit Application		ENGR 072	Electronic Circuit Application	
	ENGR 063	Water Quality & Pollution Ctrl.	ENGR 078	Communication Systems		MATH 059	Topics in Discrete Mathematics	
	ENVS 091	Env. Studies Capstone	ECON 011	Intermediate Microeconomics	SS	CPSC 097	Senior Conference	W
	POLS 048	Politics of Population	POLS 004	International Politics	SS	LING 050	Syntax	SS, W
S4	ENGR 090	Engineering Design	ENGR 090	Engineering Design	W	ENGR 090	Engineering Design	W
	BIOL 009	Our Food	MATH 054	Partial Differential Equations		ENGR 091	Biomedical Signals	
	STUA 001	Foundation Drawing	CPSC 072	Computer Vision		ARTH 074	Studies-Hist of Photography	HU
	ECON 001	Introduction to Economics	ECON 031	Introduction to Econometrics	SS	MUSI 009A	Music and Mathematics	HU

Engineering majors take **seven core courses** (ENGR 6, 11, 12, 14, either 15 or 19, 41, and 90), **five elective courses**, and **eight math & science courses**, including two credits of Physics and one credit of Biology or Chemistry.

Engineering students' first two years are typically devoted to core courses and math/science requirements. Years three and four are when students take most of their ENGR electives and complete any remaining college-wide distribution requirements.

Please note: The schedules above are for illustration only. You should always consult the latest course schedule and catalog to determine current and future course offerings.