

Engineering Degree

Requirements:

1. Engineering core
2. Major core
3. Electives

Engineering Core:

- 27.5 credits:
- 3 credits of General Education Humanities and Social Science Electives

Major Core:

Each Major has its own core courses - course pool

Electives:

Some majors have restrictions. E.g: Aerospace: Options A, B,C. Building: Options B,C

Requirements	Degree	Requirements
<u>Engineering Core</u> (30.5 credits)	Aerospace	- 27 credits: Not required to take ELEC 275
	Building	- 29 credits: Not required to take ENGR 202 - MUST replace ENGR 392 with BLDG 482
	Chemical	- 27 credits: <Not specified non-required course>
	Civil	
	Computer	- Replace ELEC 275 with ELEC 273
	Electrical	- Replace ELEC 275 with ELEC 273
	Industrial	- 27 credits: Not required to take ELEC 275 - 3 credits for Social Science Elective MUST be ACCO 220
	Mechanical	- 27 credits: Not required to take ELEC 275
	Software	- May replace ENGR 391 with COMP 361

	Computer Science	
Major Core	Aerospace	<p>-38.25 credits -May replace AERO 490 with ENGR 490</p>
	Building	<p>-75.5 credits -BCEE 371 is a summer course to be taken before entering second year of BEng program -May replace BLDG 490 with ENGR 490</p>
	Chemical	-84 credits
	Civil	<p>-74.5 credits -BCEE 371 is a summer course to be taken before entering second year of BEng program -May replace CIVI 490 with ENGR 490</p>
	Computer	<p>-70 credits -May replace COEN 490 with ENGR 490</p>
	Electrical	<p>-72.5 credits -May replace ELEC 490 with ENGR 490</p>
	Industrial	<p>-81 credits -May replace INDU 490 with ENGR 490</p>
	Mechanical	<p>-87 credits -May replace MECH 490 with ENGR 490</p>
	Software	<p>-47.5 credits from SOEN core -23 credits from Computer Science Group -3 credits from Engineering and Natural Science Group -May replace SOEN 490 with ENGR 490</p>
	Computer Science	<p>-33 credits from the Computer Science Core -6 credits from the Computer Science Complementary Core</p>
Electives	Aerospace	<p>-54.75 credits from one of 3 options: option A, option B, option C</p> <p>-Option A: + 50.25 credits core + 4.5 credits electives + Students may take no more than one of the following courses: AERO 486, MECH 375, MECH 426, MECH 460.</p> <p>-Option C: + 46.5 credits core + 8.25 credits electives + Students may take no more than one of the following courses: AERO 486, MECH 375, MECH 426, MECH 460.</p>
	Building	-15.5 credits from 2 options: option A , option B

		<p>-Students from Option A may choose one course from Option B electives.</p> <p>-Students from Option B may choose one course from Option A electives.</p>
Chemical		<p><u>-9 credits</u></p>
Civil		<p>-15 credits from one of 3 options: option A, option B, option C</p> <p>- Option A: Students may choose one of the following courses from Option B: CIVI 382, CIVI 464, CIVI 467, CIVI 469, CIVI 483, CIVI 484, or one of the following courses from Option C: BCEE 478, BLDG 480, CIVI 440.</p> <p>- Option B: Students may choose one of the following courses from Option A: CIVI 437 or CIVI 474, or one of the following courses from Option C: BCEE 478, BLDG 480, or CIVI 440.</p> <p>- Option C: Students may choose one of the following courses from Option A: CIVI 437 or CIVI 474 or one of the following courses from Option B: CIVI 382, CIVI 464, CIVI 467, CIVI 469, CIVI 483, or CIVI 484.</p>
Computer		<p><u>-19.5 credits</u></p> <p>-With adequate academic justification and with permission of the Department, students may take one technical elective course from the Electrical Engineering Electives.</p>
Electrical		<p><u>-17 credits</u></p> <p>With adequate academic justification and with permission of the Department, students may take one technical elective course from the Computer Engineering Electives.</p>
Industrial		<p><u>-12 credits</u></p> <p>- minimum chosen from at least three INDU Courses</p> <p>- Students may take no more than one course from the Other Industrial Engineering Elective Courses list.</p>
Mechanical		<p><u>-6 credits</u></p>
Software		<p><u>-16 credits</u></p>
Computer Science		<p>-18 credits from Computer Science Electives</p> <p>-6 credits from Math Electives</p> <p>+Students cannot receive credit for both COMP 339 and MATH 339; COMP 361 and MAST 334; COMP 367 and MAST 332.</p> <p>-27 credits of Minor Electives or General Elective: BCompSci</p>

		+ Any credits beyond those required to complete a declared minor may be taken as General Electives.

TODO:

1. Update missing course pool in database for **all majors except SOEN**: electives course pool
2. Add ENGR 490 as a course for Majors' Core
3. Chemical Engineering:
 - ChemEng core course pools need to be updated: missing or incorrectly parsed.
 - ChemEng Electives pools need to be updated: missing or incorrectly parsed.
4. Industrial Engineering:
 - Remove ELEC 275 from INDU Engineering Core
5. Handle excess credits.
 - COMPSCI: Any excess credits are automatically counted towards the general/technical electives course pool.
 - SOEN: Natural and Science group are counted towards technical electives (new curriculum 2023)