

# 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
<a href="#">Engineering Core</a> (30.5 credits)	Aerospace	- 27 credits: Not required to take ELEC 275
	Building	- 29 credits: Not required to take ENGR 202 - <b>MUST replace</b> 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 <b>MUST be</b> ACCO 220
	Mechanical	- 27 credits: Not required to take ELEC 275
	Software	- May replace ENGR 391 with COMP 361

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

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