

# COMPUTER ENGINEERING, B.A.SC. (CLASS OF 2022)

## \*\*Note - Information on this page may be out of date

\*\*Please view the current 2022-2023 Academic Calendar here: <https://calendar.engineering.queensu.ca/index.php> (<https://calendar.engineering.queensu.ca/>)

Elective courses in years three and four are to be chosen from Electives Lists A, B and C shown below (under Fourth Year), and by consulting suggested Streams and prerequisite paths. Your complete degree program must:

1. Exceed the minimum Accreditation Units (AU) set by ECE in each CEAB category.
2. Have at least 5 four-hundred level elective courses.
3. Have at least 4 courses from Electives Lists A, B and C that satisfy the Department criteria for qualified accreditation units in the categories of engineering science and engineering design.
4. Have at least 3 courses from Elective List B.
5. Counting required core courses, plus elective courses chosen for second, third and fourth years, result in a total of no fewer than 157.5 credits for those years.

Available combinations of elective courses are subject to timetabling constraints.

## Second Year Core 2019-2020

Code	Title	Units
APSC 200	Engineering Design & Practice II	4.00
APSC 293	Engineering Communications	1.00
ELEC 221	Electric Circuits	4.25
ELEC 252	Electronics I	4.25
ELEC 270	Discrete Mathematics with Computer Engineering App	3.50
ELEC 271	Digital Systems	4.00
ELEC 274	Computer Architecture	4.00
ELEC 278	Fundamentals Of Information Structures	4.00
ELEC 279	Introduction to Object Oriented Programming	4.00
ELEC 280	Fundamentals of Electromagnets	3.75
ELEC 299	Mechatronics Project	1.50
MTHE 235	Diff Equations For Elec & Comp	3.50
Complementary Studies List A		3.00
<b>Total Units</b>		<b>44.75</b>

## Third Year Core 2020-2021

Code	Title	Units
CMPE 365	Algorithms I	4.00
ELEC 326	Probability & Random Processes	3.50
ELEC 371	Microprocessor Interfacing and Embedded Systems	4.00
ELEC 373	Computer Networks	3.50
ELEC 374	Digital Systems Engineering	4.25
ELEC 377	Operating Systems	4.00
ELEC 390	Principles of Design and Development	3.50
APSC 221	Economic And Business Practice	3.00
CMPE 223	Software Specifications	3.00-4.00
or CMPE 320 Fndmnts Software Development		
Technical Electives (choose 2)		6.00
Complementary Studies		3.00
<b>Total Units</b>		<b>41.75-42.75</b>

## Fourth Year Core 2021-2022

Code	Title	Units
ELEC 498	Computer Engineering Project <sup>1</sup>	7.00
Technical Electives		17.10-18.10
Complementary Studies		3.00
<b>Total Units</b>		<b>27.10-28.10</b>

<sup>1</sup> with Departmental and instructor support, students may request to substitute APSC 381 Advanced Design and Skills for Innovation and APSC 480 Multi-disciplinary Industry for ELEC 390 Principles of Design and Development and ELEC 498 Computer Engineering Project

## Electives

Computer Engineering: Electives (<https://queensu-ca-public.courseleaf.com/engineering-applied-sciences/academic-plans/computer-engineering/computer-engineering-electives/>)

## Course Prerequisites

Normally, registration in a course offered by the Department is allowed provided a mark of at least D- has been achieved in each of the prerequisites for the course. Students having one course prerequisite (numbered 200 or higher) with a mark of FR may still be able to register in a course offered by the Department provided their Engineering Cumulative GPA is at least 2.0 at the end of the previous session. Prerequisites are listed under the calendar description for each course.



## Complementary Studies

Refer to the Complementary Studies section of this calendar for details regarding the requirements for all Engineering plans. For the Computer Engineering Program, the Engineering Economics course is APSC 221 Economic And Business Practice, and the Communications course is APSC 293 Engineering Communications (communications units are also included inside course ELEC 498 Computer Engineering Project).