COMMUNICATIONS ENGINEERING

Catalog Year: 202330 **Updated: 17/03/2023**

Program Map

FIRST YEAR

FALL
- MATH 1004 — Calculus for Eng. Students
- CHEM 1101 — Chemistry for Eng. Students
- Elective — Complementary Studies Elective
- ECOR 1041 — Computation & Prog. (0.25 credit) *(Weeks 1-6)*
- ECOR 1043 — Circuits (0.25 credit) *(Weeks 1-6)*
- ECOR 1042 — Data Management (0.25 credit) *(Weeks 7-12)*
- ECOR 1044 — Mechatronics (0.25 credit) *(Weeks 7-12)*
- ECOR 1055 — Introduction to Engineering Disciplines I (0.0 credit)
- ECOR 1057 — Engineering Profession (0.0 credit)

WINTER
- MATH 1104 — Linear Algebra for Eng. Students
- Elective — Basic Science Elective
- PHYS 1004 — Introductory Electromagnetism & Wave Motion
- ECOR 1045 — Statics (0.25 credit) *(Weeks 1-6)*
- ECOR 1047 — Visual Comm. (0.25 credit) *(Weeks 1-6)*
- ECOR 1046 — Mechanics (0.25 credit) *(Weeks 7-12)*
- ECOR 1048 — Dynamics (0.25 credit) *(Weeks 7-12)*
- ECOR 1056 — Introduction to Engineering Disciplines II (0.0 credit)

SECOND YEAR

FALL
- MATH 1005 — Differential Equations & Infinite Series for Eng. Students
- SYSC 2006 (2nd) — Foundation of Imperative Programming
- SYSC 2310 (2nd) — Introduction to Digital Systems
- ELEC 2501 (2nd) — Circuits & Signals
- CCDP 2100 — Communication Skills for Eng. Students

WINTER
- MATH 2004 — Multivariable Calculus for Eng. Students
- SYSC 2010 (2nd) — Programming Project
- SYSC 2320 (2nd) — Computer Organization & Architecture
- SYSC 2510 (2nd) — Probability, Statistics & Random Processes
- ELEC 2507 (2nd) — Electronics I

THIRD YEAR

FALL
- SYSC 3310 (note a) — Introduction to Real-Time Systems
- SYSC 3500 — Signals & Systems
- SYSC 4602 (3rd) — Computer Communications
- ELEC 3509 — Electronics II
- ECOR 2050 (2nd) — Design & Analysis of Engineering Experiments

WINTER
- SYSC 3503 — Communication Theory II
- SYSC 4502 (note a) — Communication Software
- SYSC 2004 (2nd) — O.O. Software Development
- ELEC 3909 — Electromagnetic Waves
- ECOR 3800 (3rd) — Engineering Economics

FOURTH YEAR

FALL
- SYSC 4907 / ECOR 4907 (4th) — Engineering Project (1.0 credit)
- SYSC 4405 — Digital Signal Processing
- SYSC 4604 — Digital Communication Theory
- SYSC 4701 (4th) — Communications Systems Laboratory
- SYSC 4810 (4th) — Introduction to Network & Software Security
- Elective — Engineering Elective (note b)

WINTER
- SYSC 4607 — Wireless Communication
- SYSC 4700 — Telecomm. Engineering
- ECOR 4995 (4th) — Professional Practice (note c)
- Elective — Complementary Studies Elective
- Elective — Engineering Elective (note b)

- **ECOR 2995 Engineering Portfolio** (note d) (0.0 credit)

IMPORTANT: A minimum grade of C- (C minus) is required in SYSC 2006 for degree progression.

*Arrow Legend
→ Required prerequisite
⇢ Concurrent prerequisite

Kindly note: this program map has been designed to ease course planning and registration for engineering students, information is accurate at the time this document is produced. Prerequisites, course titles, course offerings, and course schedule patterns are based on the academic year in which this map was prepared and are subject to change. Please contact EngAcadSupport@carleton.ca for inquiries regarding this program map.

Notes

Course Prerequisites and Year Status Requirements

The Faculty of Engineering and Design strictly upholds course prerequisites. Course prerequisites are found in the Undergraduate Calendar course descriptions, and are indicated by arrows* between courses in this program map.

Year status in Engineering prerequisites (as noted by 2nd, 3rd, or 4th above the course box) vary year to year, please carefully review requirements for your catalog year.

Academic Advising

Obtaining regular academic advising and support for course planning is essential for engineering students who are "off-pattern" from their program map. Contact your program advisor:

First year students (new and returning): ECORSupport@carleton.ca

Second year and higher students: https://ughelp.sce.carleton.ca/

Notes

(a) Requires C- (C minus) grade or better in SYSC 2006.

(b) 1.0 credits in Electronics (ELEC) or Systems and Computer (SYSC) at the 3000- or 4000-level (may include 1.0 credit in SYSC at the 5000-level).

(c) ECOR 4995 can be taken in Fall term, if required due to limited elective options in Fall term.

(d) Please review Engineering Portfolio submission and registration instructions. Students register for ECOR 2995 once 4th year status is achieved, either before or concurrent with ECOR 4995.

**Please run your audit after making any registration changes to verify they have been applied successfully