

Name: \_\_\_\_\_ ID: \_\_\_\_\_ Date: \_\_\_\_\_

Students may follow the **Standard Schedule** OR the **Advanced Schedule**. Further details are [online](#).

Students are strongly advised to **follow these schedules as closely as possible** so that prerequisites are met for the following terms. Consequences of deviating from this schedule are the responsibility of the student.

**STANDARD SCHEDULE**

**YEAR 1**

<i>TERM 1, FALL</i>	<i>TERM 2, SPRING</i>	<i>SUMMER (Standard Schedule)</i>
<input type="checkbox"/> ENSC 151-4 Intro to software development <input type="checkbox"/> ENSC 100W-3 Engineering, Science and Society <input type="checkbox"/> ENSC 105W-3 Process, Form, and Conv. in Prof. Genres <input type="checkbox"/> ENSC 120-2 Intro to Electronics Lab Instruments <input type="checkbox"/> MATH 151-3 Calculus I (or MATH 150-4)	<input type="checkbox"/> ENSC 180-3 Intro to Engineering Analysis <input type="checkbox"/> MATH 152-3 Calculus II <input type="checkbox"/> MATH 232-3 Applied Linear Algebra <input type="checkbox"/> PHYS 120-3 Mechanics and Modern Physics	<input type="checkbox"/> CHEM 121-4 General Chemistry & Lab I <input type="checkbox"/> PHYS 121-3 Optics, Electricity, and Magnetism <input type="checkbox"/> MATH 260-3 Intro to Ordinary Differential Equations <input type="checkbox"/> Complementary Studies (CMPL) Elective I#

**YEAR 2**

<i>TERM 3, FALL</i>	<i>SPRING</i>	<i>TERM 4, SUMMER</i>
<input type="checkbox"/> ENSC 204-1 Graphical Communication for Engineering <input type="checkbox"/> ENSC 220-4 Electric Circuits I <input type="checkbox"/> ENSC 251-4 Software Design and Analysis for Engineers <input type="checkbox"/> ENSC 252-4 Fundamentals of Digital Logic and Design <input type="checkbox"/> MATH 251-3 Calculus III	CO-OP TERM I	<input type="checkbox"/> ENSC 225-4 Microelectronics I <input type="checkbox"/> ENSC 254-4 Introduction to Computer Organization <input type="checkbox"/> ENSC 280-4 Engineering Measurements and Data Analysis <input type="checkbox"/> ENSC 320-4 Electric Circuits II <input type="checkbox"/> CMPT 225-3 Data Structures and Programming

**YEAR 3**

<i>TERM 5, FALL</i>	<i>TERM 6, SPRING</i>	<i>SUMMER</i>
<input type="checkbox"/> ENSC 316-3 Introduction to Electrodynamics for Engineers <input type="checkbox"/> ENSC 351-4 Embedded and Real Time System Software <input type="checkbox"/> ENSC 380-3 Linear Systems <input type="checkbox"/> ENSC 385-3 Statics and Strength of Materials <input type="checkbox"/> MACM 316-3 Numerical Analysis I	<input type="checkbox"/> ENSC 350-4 Digital Systems Design <input type="checkbox"/> ENSC 383-4 Feedback Control Systems <input type="checkbox"/> ENSC 386-4 Introduction to Mechanical Design <input type="checkbox"/> ENSC 387-4 Introduction to Electro-Mechanical Sensors and Actuators <input type="checkbox"/> Engineering Science & Design (ESD) Elective I-3 or 4*	CO-OP TERM II

**YEAR 4**

<i>FALL</i>	<i>TERM 7, SPRING</i>	<i>TERM 8, SUMMER</i>
CO-OP TERM III^	<input type="checkbox"/> ECON 103-4 Principles of Microeconomics <input type="checkbox"/> ENSC 405W-3 Project Documentation, User Interface Design, and Group Dynamics <input type="checkbox"/> ENSC 410-3 The Business of Engineering <input type="checkbox"/> ENSC 488-4 Introduction to Robotics <input type="checkbox"/> Engineering Science & Design (ESD) Elective II-4*  <input type="checkbox"/> Engineering Science & Design (ESD) Elective III-4*	<input type="checkbox"/> ENSC 406-2 Engineering Ethics, Law, and Professional Practice <input type="checkbox"/> ENSC 440-3 Capstone Engineering Science Project- <input type="checkbox"/> ENSC 482-4 Introduction to Decision Making in Engineering <input type="checkbox"/> Complementary Studies (CMPL) Elective II#  <input type="checkbox"/> Engineering Science & Design (ESD) Elective IV-4*

**ADDITIONAL REQUIREMENTS FOR HONOURS:**

- ENSC 498-1 Engineering Science Thesis Proposal
- ENSC 499-9 Engineering Science Undergraduate Thesis
- Minimum 3.0 CGPA and UDGPA required for degree**

**GPA REQUIREMENTS:**

- Minimum 2.0 CGPA and UDGPA required for degree**
- Minimum 2.4 CGPA required for registration in UD courses**
- Minimum 2.2 CGPA required to remain in Engineering**

Additional Notes

\* **ESD Electives** consist of a minimum of 15 units. See the ESD Electives section on the back of this planner.

# **Complimentary Electives** - At least one CMPL Elective should be a B-Hum, and at least one should be from *Central Issues, Methodology & Thought Process list*: <http://www.sfu.ca/engineering/current-students/undergraduate-students/requirements-and-policies/electives.html>

^ Please check with your **co-op coordinator** to confirm that all co-op requirements have been met.

## Engineering Science and Design (ESD) Electives:

Students in the Systems Engineering option students must complete **15 units of Engineering Science and Design Electives** to graduate. As part of the required 15 units, students in the Systems Option must complete **at least one** of the following constrained elective courses:

- ENSC 325-4 Microelectronics II
- ENSC 327-4 Communication Systems
- CMPT 361-3 Introduction to Computer Graphics
- CMPT 310-3 Artificial Intelligence Survey

The remaining Engineering Science and Design units can be fulfilled using courses shown below:

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|---|---|
| <ul style="list-style-type: none"> <li>▪ ENSC 424-4 Multimedia Communications Engineering</li> <li>▪ ENSC 425-4 Electronic System Design</li> <li>▪ ENSC 427-4 Communication Networks</li> <li>▪ ENSC 428-4 Data Communications</li> <li>▪ ENSC 429-4 Digital Signal Processing</li> <li>▪ ENSC 450-4 VLSI Systems Design</li> <li>▪ ENSC 452-4 Advanced Digital System Design</li> <li>▪ ENSC 470-4 Optical and Laser Engineering Applications</li> <li>▪ ENSC 472-4 Orthopaedic and Rehabilitation Engineering</li> </ul> | <ul style="list-style-type: none"> <li>▪ ENSC 474-4 Digital/Medical Image Processing</li> <li>▪ ENSC 476-4 Biophotonics and Microscopy Techniques</li> <li>▪ ENSC 477-4 Biomedical Image Acquisition</li> <li>▪ ENSC 483-4 Modern Control Systems</li> <li>▪ ENSC 489-4 Computer Aided Design and Manufacturing</li> <li>▪ ENSC 495-4 Introduction to Microelectronic Fabrication</li> <li>▪ CMPT 417-3 Intelligent Systems</li> <li>▪ MSE 480-4 Manufacturing Systems</li> <li>▪ MSE 481-4 Industrial Control Systems</li> <li>▪ MSE 483-4 Modern Control Systems</li> </ul> |
|---|---|

Policy	Link
GPA Requirements and Co-op	<a href="http://www.sfu.ca/engineering/current-students/undergraduate-students/information-for-new-students.html">http://www.sfu.ca/engineering/current-students/undergraduate-students/information-for-new-students.html</a>
Residency Requirements	<a href="http://www.sfu.ca/students/calendar/faculties-research/faculty-applied-sciences.html">http://www.sfu.ca/students/calendar/faculties-research/faculty-applied-sciences.html</a>
Complementary (CMPL) Electives	<a href="http://www.sfu.ca/engineering/current-students/undergraduate-students/requirements-and-policies/electives.html">http://www.sfu.ca/engineering/current-students/undergraduate-students/requirements-and-policies/electives.html</a>
Prerequisites and Course Descriptions	<a href="https://www.sfu.ca/students/calendar/programs/engineering-science-systems-engineering-option/major/bachelor-of-applied-science.html">https://www.sfu.ca/students/calendar/programs/engineering-science-systems-engineering-option/major/bachelor-of-applied-science.html</a>
Mandatory Co-op	<a href="http://www.sfu.ca/engineering/current-students/undergraduate-students/Co-op-and-work-experience.html">http://www.sfu.ca/engineering/current-students/undergraduate-students/Co-op-and-work-experience.html</a>
WQB Requirements for Engineering Students	<a href="http://www.sfu.ca/engineering/current-students/undergraduate-students/requirements-and-policies/wqb-requirements.html">http://www.sfu.ca/engineering/current-students/undergraduate-students/requirements-and-policies/wqb-requirements.html</a>
Duplication/Repeats of Courses	<a href="http://www.sfu.ca/engineering/current-students/undergraduate-students/requirements-and-policies/repeat-policy.html">http://www.sfu.ca/engineering/current-students/undergraduate-students/requirements-and-policies/repeat-policy.html</a>
Course Sequencing	<a href="http://www.sfu.ca/engineering/current-students/undergraduate-students/course-schedule.html">http://www.sfu.ca/engineering/current-students/undergraduate-students/course-schedule.html</a>