# SIMON FRASER UNIVERSITY SCHOOL OF ENGINEERING SCIENCE

**UNDERGRADUATE COURSE SCHEDULE: FALL SEMESTER 2021**

**(Contact: Nathan Owen** **ensccrd@sfu.ca** **x25910)**

**\*\*This schedule is subject to change without notice,**

**always consult SIS for the most current and accurate information\*\***

* *A C- grade or better in prerequisite courses is required to register in engineering science courses*
* *Minimum 2.4 CGPA is required for direct registration in upper division courses (excluding ENSC 320)*
* *Other Faculties’ students may not register with a CGPA below 2.4*
* *Online enrollment in ENSC 3XX and 4XX courses is restricted to Engineering Science students who have declared their option.*
* *Tutorials without specified days and times will occur during the specified lecture time*

**ENSC 100W Engineering, Science and Society (3)**

REQ-Corequisite: ENSC 105W. Students with credit for ENSC 100, CMPT 106, ENSC 106, or MSE 102 may not take this course for further credit.

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| #6824 | D100 | Lecture | Mon | 12:30 – 14:20 | EDB7618 | Michael Hegedus |
|  |  |  | Wed | 12:30 – 13:20 | WMC3520 | Michael Hegedus |
| #6918 | LA25 | Laboratory | Fri | 13:30 – 14:20 | WMC2530 | Michael Hegedus |
| #6915 | LA28 | Laboratory | Fri | 15:30 – 16:20 | WMC2531 | Michael Hegedus |
| #6913 | LA30 | Laboratory | Fri | 16:30 – 17:20 | WMC2531 | Michael Hegedus |

**ENSC 105W Process of Prof. Writing (3)**

REQ-Corequisite: CMPT 106, ENSC 100 or ENSC 106. Students with credit for CMPT 105W, ENSC 102 or MSE 101W may not take ENSC 105W for further credit

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| #6817 | D100 | Lecture | Mon | 10:30 – 11:20 | EDB7618 | Chelsey Currie |

**ENSC 120 Introduction to Electronics Laboratory Instruments Operation and Measurement Techniques (2)**

 Prerequisite:    BC Pre-Calculus 12 and BC Physics 12 (or equivalents).

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| #7886 | LA07 | Laboratory | Thu | 10:30 – 12:20 | ASB9800A | Atousa Hajshirmohammadi |
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**ENSC 204 Graphical Communication for Engineering (1)**

Students who have taken ENSC 104, [MSE 100](https://www.sfu.ca/students/calendar/2020/fall/courses/mse/100.html) or [SEE 100](https://www.sfu.ca/students/calendar/2020/fall/courses/see/100.html) first may not then take this course for further credit.

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| #6823 | D100 | Lecture | Wed | 15:30 - 16:20 | WMC3520 | Balbir Gill |

**ENSC 220 Electric Circuits I (4)**

REQ(PHYS 121 or PHYS 126 or PHYS 141), ENSC 120, MATH 232 and MATH 310. MATH 232 and/or MATH 310 may be taken concurrently. Students with credit for MSE 250 cannot take this course for further credit

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| #6816 | D100 | Lecture | Tue | 8:30 - 10:20 | AQ3159 | Ash Parameswaran |
|  |  |  | Thu | 8:30 - 10:20 | AQ3153 | Ash Parameswaran |
| #6921 | D101 | Tutorial | TBA | TBA | TBA | Ash Parameswaran |
| #6922 | LA01 | Laboratory | Mon | 16:30 – 18:50 | ASB9800A | Ash Parameswaran |
| #6924 | LA03 | Laboratory | Fri | 9:30 – 11:50 | ASB9800A | Ash Parameswaran |
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# ENSC 225 Microelectronics I (4)

REQ-(ENSC 220 or MSE 250), (MATH 232) and (MATH 310). Students taking or with credit for ENSC 226 or MSE 251 may not take ENSC 225 for further credit. This course has a mandatory lab for all students to complete the course requirements. This lab is an open lab.

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| #7842 | D100 | Lecture | Tue | 14:30 – 16:20 | K9500 | Majid Shokoufi |
|  |  |  | Thu | 14:30 – 16:20 | BLU9660 | Majid Shokoufi |
| #7843 | LA01 | Required Lab | TBA | TBA | TBA | Majid Shokoufi |

**ENSC 251 Software Design & Analysis for Engineers (4)**

REQ-(CMPT 128 or CMPT 135), or (CMPT 125 and CMPT 127). Seats in this course are reserved for students in the Engineering Science Major or the minor in Computer and Electronics Design program.

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| #6828 | D100 | Lecture | Tue/Thu | 10:30 – 12:20 | AQ3153 | Zhenman Fang |
| #6835 | D101 | Tutorial | TBA | TBA | TBA | Zhenman Fang |
| #6836 | LA01 | Laboratory | Tue | 14:30 – 16:50 | WMC2532 | Zhenman Fang |
| #6837 | LA03 | Laboratory | Thu | 14:30 – 16:50 | WMC2220 | Zhenman Fang |
| #6838 | LA04 | Laboratory | Fri | 9:30 – 11:50 | WMC2532 | Zhenman Fang |

# ENSC 252 Fundamentals of Digital Logic & Design (4)

REQ-(CMPT 128 or CMPT 125 or CMPT 126 or CMPT 135). Students with credit for ENSC/CMPT 150 or ENSC329/MSE 350 cannot take this course for further credit.

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| #6829 | D100 | Lecture | Tue/Thu | 12:30 – 14:20 | AQ3159 | Anita Tino |
| #6830 | D101 | Tutorial | TBA | TBA | TBA | Anita Tino |
| #6833 | LA03 | Laboratory | Fri | 9:30 – 11:50 | ASB9896 | Anita Tino |

# ENSC 316 Engineering Electromagnetics 1 (3)

REQ- MATH 251 and (ENSC 220 or MSE 250)..

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| #6851 | E100 | Lecture | Thur | 16:30 – 18:20 | AQ3181 | Bernhard Rabus |
|  |  |  | Tue | 16:30 – 18:20 | B9201 | Bernhard Rabus |
| #6852 | E101 | Tutorial | TBA | TBA | TBA | Bernhard Rabus |

# ENSC 324 Electronic Devices (3)

REQ- (ENSC 220 or MSE 250), MATH 232, and MATH 310. Students with credit for ENSC 224 or PHYS 365 may not take ENSC 324 for further credit.

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| #6843 | D100 | Lecture | Tue/Thu | 8:30 – 10:20 | WMC3260 | Bonnie Gray |
| #6929 | D101 | Tutorial | TBA | TBA | TBA | Bonnie Gray |
| #6930 | LA01 | Required Lab | TBA | TBA | TBA | Bonnie Gray |

# ENSC 351 Embedded and Real Time System Software (4)

REQ-(CMPT 128 and ENSC 215 and ENSC 250) or ENSC 254 or (CMPT 225 and (CMPT 250 or CMPT 295)) and a minimum of 60 credit hours/units. Students with credit for or who are concurrently enrolled in ENSC 451/MSE 450 cannot take this course for further credit.

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| #6815 | D100 | Lecture | Tue | 12:30 – 14:20 | WMC3520 | Craig Scratchley |
|  |  |  | Thu | 12:30 – 14:20 | AQ3181 | Craig Scratchley |
| #6857 | D101 | Tutorial | TBA | TBA | TBA | Craig Scratchley |
| #6825 | LA01 | Laboratory | Tue | 16:30 – 20:20 | ASB8800 | Craig Scratchley |
| #6826 | LA02 | Laboratory | Wed | 16:30 – 10:20 | ASB8800 | Craig Scratchley |
| #6840 | LA04 | Laboratory | Fri | 11:30 – 15:20 | ASB8800 | Craig Scratchley |

# ENSC 370 Biomedical Engineering Directions (3)

REQ-Completion of at least 25 units of engineering science (ENSC) courses.

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| #6846 | D101 | Tutorial | Wed | 10:30 – 12:20 | RCB8104 | Andrew Rawicz |
| #8029 | D200 | Seminar | Mon | 14:30 – 16:20 | TBA | Andrew Rawicz |
| #8030 | D201 | Tutorial | Wed | 14:30 – 16:20 | TBA | Andrew Rawicz |

# ENSC 380 Linear Systems (3)

REQ-ENSC 180, 220 (or MSE 250) and MATH 310. Students with credit for MSE 280 may not take ENSC 380 for further credit.

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| #6841 | D100 | Lecture | Tue/Thu | 14:30 – 16:20 | WMC3520 | Kamal Gupta |
| #6927 | D101 | Tutorial | TBA | TBA | TBA | Kamal Gupta |

# ENSC 385 Statics and Strength of Materials (3)

REQ: (PHYS 120 or PHYS 140) and MATH 152. Students with credit for ENSC 281 or MSE 221 cannot take this course for further credit.

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| #6845 | D100 | Lecture | Wed/Fri | 10:30 – 12:20 | AQ5037 | Sessional |
| #6928 | LA01 | Required Lab | TBA | TBA | TBA | Sessional |

# ENSC 424 Multimedia Communications Engineering (4)

REQ- ENSC 380 or MSE 280, with a minimum grade of C- and a minimum of 80 units.

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| #6842 | D100 | Lecture | Wed/Fri | 8:30 - 10:20 | BLU9660 | Jie Liang |
| #6847 | D101 | Tutorial | TBA | TBA | TBA | Jie Liang |

# ENSC 426 High Frequency Electronics (4)

REQ- Completion of 80 units including (ENSC 416 or PHYS 421) and (ENSC 325). Physics students with credit for PHYS 326 and PHYS

421 may take this course with permission of the instructor. Online enrollment in this course is restricted to Engineering Science students who have declared their option.

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| #7867 | D100 | Lecture | Mon/Wed | 12:30 – 14:20 | AQ3150 | Lakshman One |
| #7869 | D101 | Tutorial | TBA | TBA | TBA | Lakshman One |
| #7868 | LA01 | Required Lab | TBA | TBA | TBA | Lakshman One |

# ENSC 427 Communication Networks (4)

# REQ-ENSC 327. A minimum of 80 units required. Engineering students may not take CMPT 371 as a substitute for ENSC 427.

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| #7940 | D200 | Lecture | Mon/Wed | 14:30 – 16:20 | REMOTE | Ljiljana Trajkovic |
| #7941 | D201 | Tutorial | TBA | TBA | REMOTE | Ljiljana Trajkovic |
| #7942 | LA02 | Required Lab | TBA | TBA | REMOTE | Ljiljana Trajkovic |

# ENSC 440 Capstone B: Engineering Design Project (3)

ENSC 405W. Students will be automatically enrolled in ENSC 440 in the term immediately following successful completion of ENSC 405W. Online enrollment in this course is restricted to Engineering students who have declared their option.

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| #6849 | D100 | Lecture | Fri | 14:30 – 16:20 | AQ4150 | Andrew Rawicz |

# ENSC 477 Biomedical Image Acquisition (4)

REQ-(ENSC 380 or MSE 280) with a minimum grade of C- and a minimum of 80 units.  Students with credit for ENSC 374 cannot take this course for further credit. THIS COURSE IS COMBINED WITH ENSC895G100.

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| #6932 | D100 | Lecture | Tue/Thu | 14:30 – 16:20 | REMOTE | Teresa Cheung |
| #6926 | D101 | Tutorial | TBA | TBA | REMOTE | Teresa Cheung |
| #6934 | LA02 | Laboratory | Fri | 8:30 – 10:20 | REMOTE | Teresa Cheung |

**TEKX101 3D Printing Technologies (3)**Students will learn the basic concepts of 3D printing, computer design tools, and the use of 3D scanners to make replicas of existing objects. Students will complete several 3D printed projects within the course. Quantitative/Breadth-Science.

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| #7923 | D100 | Lecture | Fri | 12:30 – 14:20 | BLU10921 | Juan Ferrer |