

SIMON FRASER UNIVERSITY
SCHOOL OF ENGINEERING SCIENCE
UNDERGRADUATE COURSE SCHEDULE: SPRING SEMESTER 2022

(Contact: 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 180

Introduction to Engineering Analysis (3)

REQ-(CMPT 128, CMPT 120, or CMPT 130) and (MATH 151 or MATH 150). Corequisite: MATH 152 and MATH 232.

#7484	D100	Lecture	Tue	14:30 – 16:20	SSCB9200	Herbert Tsang
#7485	LA01	Laboratory	Thu	14:30 – 16:30	SSCB9200	Herbert Tsang

ENSC 325

Microelectronics II (4)

REQ-ENSC 225 or ENSC 226 or MSE251

#7492	D100	Lecture	Mon/Wed	8:30 – 10:20	AQ3159	Marek Syrzycki
#7497	D101	Tutorial	TBA	TBA	TBA	Marek Syrzycki
#7498	LA01	Required Lab	TBA	TBA	TBA	Marek Syrzycki

ENSC 327

Communication Systems (4)

REQ-(ENSC 380 or MSE 280) and ENSC 280.

#8155	D200	Lecture	Wed/Fri	14:30 – 16:20	WMC3260	Atousa Hajshirmohammadi
#8156	D201	Tutorial	TBA	TBA	TBA	Atousa Hajshirmohammadi
#8157	LA02	Required Lab	TBA	TBA	TBA	Atousa Hajshirmohammadi

ENSC 350

Digital Systems Design (4)

REQ-(ENSC 215 and either ENSC 250 or CMPT 250) or (ENSC 252 and ENSC 254)

#8284	D200	Lecture	Wed/Fri	10:30 – 12:20	SSCC9002	Lakshman One
#8285	D201	Tutorial	TBA	TBA	TBA	Lakshman One
#8286	LB01	Laboratory	TBA	TBA	TBA	Lakshman One

ENSC 383

Feedback Control Systems (4)

REQ-ENSC 380 (or MSE 280). Students with credit for MSE 381 may not take ENSC 383 for further credit

#8152	D200	Lecture	Tue/Thu	8:30 – 10:20	BLU9660	Majid Shokoufi
#8153	D201	Tutorial	TBA	TBA	TBA	Majid Shokoufi
#8154	LA02	Required Lab	TBA	TBA	TBA	Majid Shokoufi

ENSC 386

Introduction to Mechanical Design (4)

REQ-PHYS 120, MATH 310, and (ENSC 281 or ENSC 385). Students who have previously taken ENSC 230 cannot take this course for credit.

#8253	D200	Lecture	Tue/Thu	10:30 – 12:20	BLU10655	Shahram Payandeh
#8254	D201	Tutorial	TBA	TBA	TBA	Shahram Payandeh
#8255	LA02	Required Lab	TBA	TBA	TBA	Shahram Payandeh

ENSC 387**Introduction to Electro-Mechanical Sensors and Actuators (4)**

REQ-ENSC 380 or MSE 280. Students with credit for MSE 310 may not take ENSC 387 for further credit.

#7496	D100	Lecture	Mon/Wed	12:30 – 14:20	BLU10021	Ash Parameswaran
#7504	D101	Tutorial	TBA	TBA	TBA	Ash Parameswaran
#7528	LA01	Required Lab	TBA	TBA	TBA	Ash Parameswaran

ENSC 403**Directed Studies - Interferometric Synthetic Aperture Radar Remote Sensing Applications (4)**

This course reviews the principles of Interferometric Synthetic Aperture Radar (SAR) Remote Sensing and its Applications.

REQ - Undergraduate courses in advanced mathematics (for lecture), basic programming in matlab or python (for course project)

#8090	D100	Lecture	Mon/Fri	15:30 – 16:50	AQ4130	Bernhard Rabus
#8091	LA01	Laboratory	Mon/Fri	17:00 – 18:20	TASC1-7006	Bernhard Rabus

ENSC 405W**Capstone A: Project Design, Management, and Documentation (3)**

Enrollment in this course is by application: <https://coursys.sfu.ca/forms/ensc-ensc-405w-capstone-a-application/>

#7505	D100	Lecture	Tue	12:30 – 14:20	AQ3003	Michael Hegedus
#7508	LA01	Laboratory	Thu	12:30 – 14:20	AQ3003	Michael Hegedus

ENSC 410**The Business of Engineering (3)**

REQ- A minimum of 80 units is required to enroll in this course. Students with credit for ENSC 201, ENSC 411, or MSE 300 cannot complete this course for further credit

#7506	D100	Lecture	Wed	12:30 – 14:20	AQ3154	Ryan D’Arcy
			Fri	12:30 – 14:20	AQ3159	
#7529	D101	Tutorial	TBA	TBA	TBA	Ryan D’Arcy

ENSC 413**Deep Learning Systems in Engineering (3)**

Enrollment in this course is by application: <https://coursys.sfu.ca/forms/ensc-413-application-form/> THIS COURSE IS COMBINED WITH ENSC 813 G100

#7532	D100	Lecture	Tue/Thu	14:00 – 15:50	REMOTE	Ivan Bajic
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ENSC 416**Engineering Electromagnetics II: Design (4)**

REQ-ENSC 316 with a grade of at least C+.

#7513	D100	Lecture	Wed	13:30 – 15:20	AQ5008	Lakshman One
			Fri	13:30 – 15:20	AQ4140	Lakshman One
#7515	LA01	Required Lab	TBA	TBA	TBA	Lakshman One

ENSC 428**Digital Communications (4)**

REQ-ENSC 327 and a minimum of 80 units.

#7512	D100	Lecture	Tue/Thu	10:30 – 12:20	AQ5037	Daniel Lee
#7514	D101	Tutorial	TBA	TBA	TBA	Daniel Lee
#7516	LA01	Required Lab	TBA	TBA	TBA	Daniel Lee

ENSC 450**VLSI Systems Design (4)**

REQ- (ENSC 225 or ENSC 226 or MSE 251) and ENSC 350, and a minimum of 80 units.

#7522	E100	Lecture	Tue/Thu	16:30 – 18:20	AQ3003	Anita Tino
#7523	E101	Tutorial	TBA	TBA	TBA	Anita Tino
#7525	LA02	Laboratory	Fri	8:30 – 12:20	WMC2503	Anita Tino

ENSC 462**Advanced Topics in Digital Systems Engineering (4)**

Advanced topics in digital system engineering using FPGA prototyping. Emphasis will be placed on system architectures, modern digital system design, System-on-Chips (SoCs), and the interfacing of processors and peripherals. REQ- ENSC 350 and 351, with a minimum grade of C- and a minimum of 80 units.

#8388	D200	Lecture	Tue	14:30 – 16:20	SWH10061	Anita Tino
#8390	D201	Tutorial	Thu	14:30 – 16:20	BLU10921	Anita Tino
#8389	LA02	Laboratory	Fri	14:30 – 18:20	ASB8800	Anita Tino

ENSC 474**Digital/Medical Image Processing (4)**

REQ- ((ENSC 180 and ENSC 251) or CMPT 225), and a minimum of 80 units. Students with credit for ENSC 460/895-Digital Image Processing and Analysis cannot take this course for further credit. THIS COURSE IS COMBINED WITH ENSC 895 G200.

#7479	D100	Lecture	Wed Fri	10:30 – 12:20 10:30 – 12:20	BLU10011 WMC2200	Parvaneh Saeedi
#7482	D101	Tutorial	TBA	TBA	TBA	Parvaneh Saeedi
#7530	LA01	Required Lab	TBA	TBA	TBA	Parvaneh Saeedi

ENSC 475**Biomedical Instrumentation (4)**

REQ- (ENSC 225 or MSE 251), ENSC 320, (ENSC 380 or MSE 280) and a minimum of 80 units. ENSC 380/MSE 280 can be taken concurrently. Students with credit for ENSC 372 cannot take this course for further credit. THIS COURSE IS COMBINED WITH ENSC 895 G400

#7549	D100	Lecture	Tue Thu	8:30 – 10:20 8:30 – 10:20	AQ5018 AQ5037	Bonnie Gray
#7550	D101	Tutorial	TBA	TBA	TBA	Bonnie Gray
#7551	LA01	Laboratory	TBA	TBA	TBA	Bonnie Gray

ENSC 483**Modern Control Systems (4)**

Prerequisite: ENSC 383 or MSE 381, with a minimum grade of C- and a minimum of 80 units. Students with credit for MSE 483 may not take ENSC 483 for further credit.

#8190	E100	Lecture	Mon/Wed	16:30 – 18:20	AQ3153	Balbir Gill
#8191	E101	Laboratory	TBA	TBA	TBA	Balbir Gill

ENSC 488**Introduction to Robotics (4)**

REQ-(ENSC 230 or ENSC 386) and (ENSC 383 or MSE 381), and 80 units

#7507	D100	Lecture	Wed/Fri	8:30 – 10:20	AQ3003	Kamal Gupta
#7509	D101	Tutorial	TBA	TBA	TBA	Kamal Gupta
#7510	LA01	Required Lab	TBA	TBA	TBA	Kamal Gupta

ENSC 495**Introduction to Microelectronic Fabrication (4)**

REQ-ENSC 225 or ENSC 226 or MSE 251 or PHYS 365, and permission of the instructor and a minimum of 80 units. Enrolment in this course is by application only. Please fill in this form <https://coursys.sfu.ca/forms/ensc-495-application-form/>. THIS COURSE IS COMBINED WITH ENSC 851 G100

#8038	E200	Lecture	Mon	16:30 – 18:20	AQ3154	Michael Adachi
#8039	LB01	Laboratory	Wed	16:30 – 20:20	ASB8825	Michael Adachi
#8040	LB02	Laboratory	Fri	8:30 – 12:20	ASB8825	Michael Adachi

TEKX101

Introduction to 3D Printing & Scanning 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.

#7998

D100

Lecture

Fri

12:30 – 14:20

SWH10061

Juan Ferrer