Masters of Engineering (MEng) Course Advising Sheet

Civil / Electrical / Mechanical Engineering 2024-25

Meet our Team!

How to contact: **engineering.graduate@ubc.ca**

Shannon Hohl – Graduate Advisor
If you have a question and are uncertain who to ask – connect with Shannon. In-person and virtual advising meetings also available.

Dr. Rudolf Seethaler – Associate Director of Graduate Studies

Program Requirements	Successful completion of 30 credits of coursework • 24 credits must be Graduate level courses from the School of Engineering (ENGR 5XX, APSC 5XX, MANF 5XX) • 12 credits must be graduate level courses (500-level) within your discipline (CIVIL, ELEC, MECH) – see page 4 • ENGR 413 Law & Ethics – **register during the 2025 Summer Session only*** • APSC 501 Professional Communications for Engineering Leaders – register 2024 Winter Term 1* • APSC 505 Engineering Leadership – register during the 2025 Summer Session* *** new for 2024/25** – mandatory courses due to feedback from employers and MEng program graduates
Grade Requirements	• May have up to 6 credits with grades between 60% and 67% inclusive • If you have 6 credits of coursework in the 60 -67% range, all other grades must be a minimum of 68% • In any circumstance, under 60% is a failure • Students receiving grades below 68% in any of their Winter term 1 courses are requested to email engineering.graduate@ubc.ca during the first week of classes in January to discuss course selection for their remaining program terms.

Undergraduate courses	• A maximum of 6 credits of undergraduate courses may be counted towards your degree requirements (ENGR 3XX, ENGR 4XX or MANF 4XX) • One ENGR 4XX is pre-approved during the 2024 Winter Term 1 or Term 2 • ENGR 413 must be taken in the 2025 Summer Session • ENGR 3XX, MANF 3XX, MANF 4XX courses that are not individually approved in writing by Dr. Rudolf Seethaler **will not** count towards your degree. Courses similar to others courses already completed at UBC or at other institutions will not be approved. Email engineering.graduate@ubc.ca to request course approvals.
General Course Information	• For a 4XX level course with prerequisites, students must email. engineering.graduate@ubc.ca with the course number and student to request registration in the course. • Courses listed on this advising sheet do not require approval from Dr. Seethaler. • Students are allowed a maximum of 6 credits in ENGR 598 courses. • Students are allowed a maximum of 6 credits taken outside of ENGR/APSC/MANF. (Requires instructor and Dr. Seethaler approval) Request form: https://gradstudies.ok.ubc.ca/resources/forms/registration-audit-form/ • Courses in preferred disciplines are only offered during Winter terms 1 and 2. • Over the Summer terms 1 and 2, a minimum of four common courses will be offered. • Students are asked to enroll in three courses each Winter term, and two courses each summer term. Registering in more courses blocks seats for other students. Please email engineering.graduate@ubc.ca if you are planning on taking more than 3 courses per 2024 Winter term. • The MEng Course Advising Sheet changes annually. Courses offered this year may not be offered in subsequent years. Student should refer to the Course Advising Sheet from the year the course was taken to know how it will be used to fulfill their degree requirements. • Courses are subject to minimum and maximum enrolments. The School of Engineering reserves the right to cancel a course if the minimum enrolment is not met. If a course is cancelled, you will be notified via e-mail. • Course descriptions, can be found in the Academic Calendar. Not all courses listed in the Academic Calendar are offered each year. Course Descriptions in Academic Calendar • Term dates can be found on the Academic Calendar: Academic Year 2024/25 | UBC Academic Calendar

SUGGESTED COURSE REGISTRATION CHART

10 Courses required to complete MEng degree

Winter		Summer	
Term1	Term 2	Term 1	Term 2
3 courses	3 courses	2 courses	2 courses

COURSES NOT ASSIGNED TO A SPECIFIC DISCIPLINE

Winter Term 1	**Winter Term 2**
ENGR 4XX (other than ENGR 413) APSC 501 Professional Communication for Engineering Leaders	ENGR 4XX (other than ENGR 413) ENGR 511 Technology Entrepreneurship for Engineers

ANTICIPATED 2025 SUMMER TERM COURSES

Note: Courses anticipated for the Summer 2025 Terms cannot be taken in the Winter 2024 Terms

APSC 505 Engineering Leadership
ENGR 413 Law and Ethics for Engineers
ENGR 542 Engineering and Society.
ENGR 544 Life Cycle Assessment and Management
ENGR 589 Multicriteria Optimization and Design of Experiments

MANDATORY COURSES

ENGR 413 Law & Ethics – available **during 2025 Summer Session**
APSC 501 Professional Communications for Engineering Leaders – **2024 Winter Term 1**
APSC 505 Engineering Leadership – available **during 2025 Summer Session**

DISCIPLINE SPECIFIC COURSES

CIVIL ENGINEERING

Winter Term 1	Winter Term 2
APSC 509 Construction Supply Chain Digitalization and Informatics **ENGR 528** Earthquake Engineering **ENGR 533** Construction Engineering and Management **ENGR 536** Sustainable Land Use and Transportation **MANF 560** Supply Chain Tactics and Strategies	**ENGR 522** Advanced Design of Steel Structures **ENGR 523** Seismic Design of Buildings **ENGR 529** Rehabilitation of Concrete Structures **ENGR 532** Project Planning and Control **ENGR 598R** Design of Transportation Systems

ELECTRICAL ENGINEERING

Winter Term 1	Winter Term 2
ENGR 518 Applied Machine Learning for Engineers **ENGR 558** Power Electronics **ENGR 572** Fibre Optics and Photonics **ENGR 574** Antennas and Propagation **ENGR 580** Modern Control	**ENGR 501** Deep and Reinforcement Learning for Engineers **ENGR 512** Signals, Systems, and Inference **APSC 519** System Identification **ENGR 535** Autonomous Vehicle Technology

MECHANICAL ENGINEERING

Winter Term 1	Winter Term 2
ENGR 580 Modern Control **ENGR 582** Finite Element Methods **ENGR 584** Heat and Mass transfer **MANF 516** Advanced Manufacturing **MANF 555** Factory Planning **MANF 560** Supply Chain Tactics and Strategies	**APSC 504** Solar Cell Engineering **APSC 519** System Identification **ENGR 519** Tissue Engineering **ENGR 535** Autonomous Vehicle Technology **ENGR 563** Advanced Polymer Science and Engineering