

Program Map – Bachelor of Engineering (Software Engineering)

Year 1		Year 2	Year 3			Year 4		
Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Work-Integrated Learning Term (Co-op)	Semester 8
MTH110 Mathematics I 3 h ¹	MTH200 Mathematics II 3 h	SEM305 Discrete Mathematics 5 h	SEM405 Statistics 3 h	SEA500 Introduction to Data Mining 4 h ²	SED600 Topics in Software Design 4 h ³	SED700 Capstone I 4 h		SED800 Capstone II 5 h
SEM105 Linear Algebra 4 h	SES250 Electromagnetics 6 h	SES300 Optics 4 h	SEP400 Operating Systems 4 h ¹	SEH500 Microprocessors and Computer Architecture 4 h ¹	SEA600 Introduction to Machine Learning 4 h ¹	SEP700 Compiler Design 4 h ¹		SEG800 Digital Signal and Image Processing 4 h ¹
SEP101 Programming Fundamentals 4 h	SEP200 Object-Oriented Programming 4 h ¹	SEH300 Digital and Analog Circuits 4 h ¹	SEP420 Web Programming and Scripting 4 h ¹	SED500 Introduction to Software Engineering 4 h ²	SEP600 Embedded Systems 4 h ¹	SEN700 Computer Networks 4 h ¹		SEN800 Computer Security and Cryptography 4 h ¹
SEA100 Explorations of Artificial Intelligence 4 h	SED200 Design and Analysis 3 h	BTD210 Database Design Principles 4 h	BTP500 Data Structures and Algorithms 4 h	BTP605 Design Patterns for Enterprise Solutions 4 h	SEE600 Software Testing and Quality Assurance 4 h ¹	Professional Option 4 h		Professional Option 4 h
MEC110 Mechanics 6 h	CHM300 Chemistry 6 h	BTP405 System Development and Deployment 4 h	SEA400 Artificial Intelligence 4 h ¹	SEE500 Systems Requirements Engineering 4 h ¹	BTH545 Principles of GUI Design and Programming 4 h	Professional Option 4 h		Professional Option 4 h
ENG106 Writing Strategies 3 h	BTC240 Interpersonal Communications in Organizations 3 h	Liberal Studies Option (LSO) 3 h	BTC440 Business and Technical Writing 3 h	BTS535 Software Project Management 4 h	LSP240 Micro Economics- Theory & Practice 3 h	SEL700 Law, Ethics, and Professional Practice 3 h		Liberal Studies Option (LSO) 3 h
Core courses	Non-core courses				WTP200 Work Term Preparation	Liberal Studies Option (LSO) 3 h	Work-Integrated Learning Term (Co-op)	

¹ Course with 11% of instructional hours delivered asynchronously online.

² Hybrid course with 25% of the instructional hours delivered asynchronously online.

³ Hybrid course with 50% of the instructional hours delivered asynchronously online.