



The Association of Professional
Engineers and Geoscientists of Alberta
SOFTWARE ENGINEERING
COURSE EQUIVALENTS
2019 EDITION

| <i>University of Alberta</i> | | <i>University of Calgary</i> | |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------|
| 19-Soft-A1 CMPUT 204 & CMPUT 304 | Algorithms & Data Structures Algorithms I Algorithms II | ENSF 338 & ENSF 300 | Practical Data Structures and Algorithms Software Engineering Practices for data Management |
| 19-Soft-A2 ECE 311 & CMPUT 379 | Computer Architecture and Operating Systems Computer Organization and Architecture Operating Systems Concepts | ENCM 369 & ENSF 461 | Computer Organization Applied Operating Systems |
| 19-Soft-A3 CMPUT 301 | Software Design Introduction to Software Engineering | ENSF 380 | Object Oriented Principles for Software Design |
| 19-Soft-A4 | Real Time Systems <i>No Course Equivalent Offered</i> | ENSF 460 | Embedded Software and Hardware Systems |
| 19-Soft-A5 ECE 321 | Requirements & Specifications Software Requirements Engineering | SENG 471 | Software Requirements Engineering |
| 19-Soft-A6 ECE 322 | Software Quality Assurance Software Testing and Maintenance Engineering | SENG 438 | Software Testing, Reliability and Quality |
| 19-Soft-A7 CMPUT 401 | Software Development Process Software Processes and Product Management | ENSF 409 | Principles of Software Development |
| 19-Soft-B1 ECE 421 | Advanced Software Design Exploring Software Development Domains | ENSF 480 | Principles of Software Design |
| 19-Soft-B2 | User Interface <i>No Course Equivalent Offered</i> | CPSC 481 | Human Computer Interaction I |
| 19-Soft-B3 CMPUT 333 | Security Security in a Networked World | CPSC 525 | Principles of Computer Security |
| 19-Soft-B4 ECE 412 | Dependable Systems Fault-Tolerant Computing | | <i>No Course Equivalent Offered</i> |
| 19-Soft-B5 CMPUT 474 | Software Modeling & Verification (Formal Method) Formal Languages, Automata and Computability | SENG 523 | Formal Methods |
| 19-Soft-B6 CMPUT 401 | Software Project Management Software Process and Product Management | SENG 511 | Software Project Management |
| 19-Soft-B7 | Reverse Engineering, Maintenance & Evolution <i>No Course Equivalent Offered</i> | | <i>No Course Equivalent Offered</i> |
| 19-Soft-B8 ECE 420 | Distributed Systems Parallel and Distributed Programming (Credit for one of B8 or B9 only) | ENSF 462 | Networked Systems |
| 19-Soft-B9 ECE 420 | Parallel Computing Parallel and Distributed Programming (Credit for one of B8 or B9 only) | | <i>No Course Equivalent Offered</i> |
| 19-Soft-B10 ECE 487 | Networking and Communication Data Communications Networks | ENSF 462 | Networked Systems |
| 19-Soft-B11 ECE 360 | Process Control Systems Control Systems I | ENEL 441 | Control Systems I |
| 19-Soft-B12 CMPUT 340 | Engineering Computation: Numerics Introduction to Numerical Methods | ENCM 517 | Computer Arithmetic and Computational Complexity |
| 19-Soft-B13 ECE 421 | Performance Analysis and Simulation Exploring Software Development Domains | SENG 533 | Software Performance Evaluation |
| 19-Soft-B14 ECE 422 | Safety Critical Systems Reliable and Secure Systems Design | | <i>No Course Equivalent Offered</i> |
| 19-Soft-B15 ECE 449 | Artificial Intelligence Intelligent Systems Engineering | ENSF 544 | Data Science for Software Engineers |
| 19-Soft-B17 CMPUT 474 | Programming Language, Semantics and Implementation Formal Languages, Automata and Computability | | <i>No Course Equivalent Offered</i> |
| 19-Soft-B18 CMPUT 411 | Data Visualization Introduction to Computer Graphics | CPSC 453 | Introduction to Computer Graphics |

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