



The Association of Professional Engineers,
Geologists and Geophysicists of Alberta

SOFTWARE ENGINEERING COURSE EQUIVALENTS 2004 Edition

University of Alberta

04-Soft-A1 Algorithms & Data Structures

CMPUT 304 Algorithms II

04-Soft-A2 Computing Structures

CMPUT 291 Introduction to File and Database Management

CMPUT 329 Computer Organization and Architecture II

CMPUT 379 Operating System Concepts

And

CMPE 382 Computer Organization and Architecture

Or

CMPUT 429 Computer Systems and Architecture

04-Soft-A3 Software Design

CMPE 210 Principles of Software Implementation

And

CMPE 300 Introduction to Software Engineering Process

Or

CMPUT 301 Introduction to Software Engineering

04-Soft-A4 Real Time Systems

No Course Equivalent

04-Soft-A5 Requirements and Specifications

CMPE 310 Applying Software Engineering Practices Project I

CMPE 320 Software Testing and Maintenance Engineering

04-Soft-A6 Software Quality Assurance

CMPUT 402 Software Quality

04-Soft-A7 Software Process

CMPUT 401 Software Processes and Product Management

04-Soft-B1 Advanced Object Oriented Design

CMPE 402 C/C++ Programming for Engineers

CMPE 410 Exploring Software Development Domains

- 04-Soft-B2 User Interface**
No Course Equivalent
- 04-Soft-B3 Security/Safety**
CMPUT 299 Security in a Networked World
Section B1
- CMPUT 299 Codes, Codemakers,
Section B2 Codebreakers-An Introduction to Cryptography
- 04-Soft-B4 Reliability and Fault Tolerance**
CMPE 420 Reliable and Secure Systems Design
- 04-Soft-B5 Software Modeling & Verification (Formal Methods)**
CMUPT 474 Formal Languages, Automata and Computability
- 04-Soft-B6 Advanced Software Project Management, Life cycle Methodologies**
CMPUT 402 Software Quality
Or
CMPE 300 Introduction to Software Engineering Process
And
CMPE 320 Software Testing and Maintenance Engineering
- 04-Soft-B7 Reverse Engineering, Maintenance & Evolution**
No Course Equivalent
- 04-Soft-B8 Distributed Systems**
No Course Equivalent
- 04-Soft-B9 Parallel Computing**
No Course Equivalent
- 04-Soft-B10 Networking and Communications**
CMPE 487 Data Communication
Networks
Or
CMPUT 313 Computer Networks
- 04-Soft-B11 Process Control Systems**
EE 357 Control Systems I

04-Soft-B12 Scientific Computation

CMPUT 340 Introduction to Numerical
Methods

Or

EE 231 Numerical Analysis for
Electrical and Computer
Engineers

04-Soft-B13 Performance Analysis & Simulation

No Course Equivalent

04-Soft-B14 Safety Critical Systems

CMPE 420 Reliable and Secure systems
Design

04-Soft-B15 Artificial Intelligence/Intelligent Systems

CMPE 449 Computational Intelligence

Or

CMPUT 366 Intelligent Systems

04-Soft-B16 Compilers

CMPUT 415 Compiler Design

04-Soft-B17 Programming Language Paradigm

CMPUT 325 Non-procedural
Programming Languages

CMPUT 474 Formal Languages,
Automata and Computability

04-Soft-B18 Computer Graphics/Imaging/Visualization

CMPUT 306 Introduction to Image Processing

CMPUT 411 Introduction to Computer Graphics

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