



Introduction to Cloud Computing – CIST 205

Computer Information Systems Technology Program

Course Outline

COURSE IMPLEMENTATION DATE: September 2024
OUTLINE EFFECTIVE DATE: September 2024
COURSE OUTLINE REVIEW DATE: March 2029

GENERAL COURSE DESCRIPTION:

In this course, learners gain a wider knowledge and deeper understanding of installing, configuring, and managing cloud infrastructure for an organization. Students are introduced to the cloud as a platform to acquire and use various resources which are traditionally used on a local hardware. This includes: cloud deployment models, cloud platform architectures, cloud computing platforms and comparative analysis. Cloud computing is comprised of virtual machine instances, load balancers, auto scaling groups, snapshots, and cloud networking. Students gain experience working with virtual private clouds (VPC), cloud storage and content delivery through cloud-hosted databases. Cloud security models are also covered including user identity, access management, and resource security. This course is a mixture of lecture and hands-on, with students practicing in the lab using services from various cloud providers such as Microsoft, VMWare, Google, and Amazon.

Program Information: This course is required for the second year of the Computer Information Systems Technology program.

Delivery: This program is delivered hybrid (includes both face-to-face and online components).

COTR Credits: 3

Hours for this course: 60 hours

Typical Structure of Instructional Hours:

Instructional Activity	Duration
Lecture Hours	30
Seminars / Tutorials	
Laboratory / Studio Hours	30
Practicum / Field Experience	
Other Contact Hours	
Total	60

Practicum Hours (if applicable):

Type of Practicum	Duration
On-the-Job Experience	
Formal Work Experience	
Other	
Total	N/A

Course Outline Author or Contact:

Joy Brown, Department Head

Signature

APPROVAL SIGNATURES:

Department Head
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Dean of Trades and Technology
Dr. Jack Moes
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Department Head Signature

Dean Signature

EDCO

Valid from: September 2024 – March 2029

Education Council Approval Date

COURSE PREREQUISITES AND TRANSFER CREDIT:

Prerequisites: CIST 107 and CIST 201

Corequisites: None

Flexible Assessment (FA):

Credit can be awarded for this course through FA Yes No

Learners may request formal recognition for flexible assessment at the College of the Rockies through one or more of the following processes: External Evaluation, Worksite Assessment, Demonstration, Standardized Test, Self-assessment, Interview, Products/Portfolio, Challenge Exam. Contact an Education Advisor for more information.

Transfer Credit: For transfer information within British Columbia, Alberta and other institutions, please visit <http://www.cotr.bc.ca/Transfer>.

Student should also contact an academic advisor at the institution where they want transfer credit.

Prior Course Number: N/A

Textbooks and Required Resources:

Textbook selection varies by instructor and may change from year to year. At the Course Outline Effective Date the following textbooks were in use:

TBD

Please see the instructor's syllabus or check COTR's online text calculator <https://textbook.cotr.bc.ca/> for a complete list of the currently required textbooks.

LEARNING OUTCOMES:

Upon the successful completion of this course, students will be able to

- explain the components of a cloud infrastructure and their functions;
 - describe various cloud platforms, their architectures, and their characteristics;
 - recognize and describe various types of cloud services and deployment models;
 - discuss and evaluate risks associated with Cloud computing and describe mitigation strategies;
 - configure conventional cloud services on commercially available cloud service providers;
 - design and deploy cloud-based websites; and
 - design and implement cloud-based database systems.
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COURSE TOPICS:

- Cloud services, Cloud Service Models: SaaS, PaaS, IaaS
- Azure services and APIs and how they relate to Cloud computing
- Various Cloud deployment models and their differences
- Available Cloud Service Platforms and each one's features
- Amazon Cloud Services, AWS APIs
- Google Cloud Services, APIs

See instructor's syllabus for the detailed outline of weekly readings, activities and assignments.

EVALUATION AND ASSESSMENT (Face-to-Face Delivery):

Assignments	% of Total Grade
Assignments	55%
Project	20%
Final Exam	<u>25%</u>
Total	100%

Please see the instructor's syllabus for specific classroom policies related to this course, such as details of evaluation, penalties for late assignments and use of electronic aids.

EXAM POLICY:

Students must attend all required scheduled exams that make up a final grade at the appointed time and place.

Individual instructors may accommodate for illness or personal crisis. Additional accommodation will not be made unless a written request is sent to and approved by the appropriate Department Head prior to the scheduled exam.

Any student who misses a scheduled exam without approval will be given a grade of "0" for the exam.

COURSE GRADE:

Course grades are assigned as follows:

Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F
Mark (Percent)	≥ 90	89-85	84-80	79-76	75-72	71-68	67-64	63-60	59-55	54-50	< 50

A grade of "D" grants credit, but may not be sufficient as a prerequisite for sequential courses.

ACADEMIC POLICIES:

See www.cotr.bc.ca/policies for general college policies related to course activities, including grade appeals, cheating and plagiarism.

COURSE CHANGES:

Information contained in course outlines is correct at the time of publication. Content of the courses is revised on an ongoing basis to ensure relevance to changing educational, employment and marketing needs. The instructor endeavours to provide notice of changes to students as soon as possible. The instructor reserves the right to add or delete material from courses.