COLLEGE OF THE ROCKIES

Introduction to Client-Server Computing – CIST 201
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 students are introduced to the fundamentals of developing a distributed computer system based on the client/server paradigm. The challenges, the tools and techniques, and various characteristics of mobile vs desktop environments with respect to the Client-Server application model are analyzed. Students will develop distributed applications using sockets, datagrams, pipes and FIFO buffers, using low-level tools such as C++ or windows API (Application Programming Interface) such as COM (Common Object Model), RPC (Remote Procedure Call), and various web technologies, based on the experience and preferences of the instructor.

The goal for this course is to make students aware, through hands-on work, of the challenges of a networked application, such as performance, delays, reliability, scalability, and security issues.

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	20
Seminars / Tutorials	
Laboratory / Studio Hours	40
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

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Course Outline Author or Contact:

Joy Brown, Department Head

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Signature

APPROVAL SIGNATURES:

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Dean of Trades and Technology
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Department Head Signature

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Dean Signature

EDCO

Valid from: September 2024 – March 2029

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Education Council Approval Date

COURSE PREREQUISITES AND TRANSFER CREDIT:

Prerequisites: CIST 105 and CIST 106

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

- analyze requirements and design goals for client server and distributed system;
- analyze, debug, and identify bottlenecks in a distributed system;
- use common tools for developing distributed systems in web, mobile and desktop environments;
- explain key concepts in networking and client/server software systems;
- perform maintenance, optimization, and restructuring of an existing basic networked system; and
- navigate the challenges of a networked application, such as performance, delays, reliability, scalability, and security issues.

COURSE TOPICS:

- Client/Server architecture
- Network programming
- Networking protocols
- Network lag, packet analysis
- Distributed system
- Performance analysis and debugging

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	40%
Lab Work	25%
Participation (in group assignment & lab work)	5%
Final Exam	30%
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 schedules 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.