



CIST-107 – Introduction to Internet Programming and Web Applications

Technology

Effective Term & Year: Fall 2024
Course Outline Review Date: 2029-03-01

Program Area: Information Technology

Description:

In this course students learn how to design and develop a software application that works through browsers or the internet. Students will learn about various web application development technologies, and how to create a web application using a modern MVC (Model-View-Controller) framework which communicates with an Apache server. In a small team of 2-4, students will build a robust Representational State Transfer (REST)ful webapp back-end to complement their chosen projects. The team will collaborate using a shared Git repository and Gitflow workflow.

Program Information:

This course is required for the first year of the Computer Information Systems Technology program.

Delivery Methods: Hybrid – On-campus (Face-to-Face) and Online

Credit Type: College of the Rockies Credits

Credits: 3

Instructional Activity and Hours:

Activity	Hours
Classroom, Directed Studies or Online Instruction	25
Seminar/Tutorials	

Laboratory/Studio	35
Practicum/Field Experience	
Co-op/Work Experience	
Other	
Total	60

Course Requisites:

- Completed the following:
 - [CIST102](#) – Introduction to Programming (4)
 - [CIST103](#) – Website Development (3)

Flexible Assessment: Yes

Students are able to request formal recognition of their prior learning or experience outside the classroom. Challenge examination, portfolio-assisted assessment, or work-based assessment are used to identify, assess, and recognize prior skills, competencies, and knowledge to achieve course credit. Tuition fees apply, refer to [Policy 2.5.5 Prior Learning Assessment and Recognition \(PLAR\)](#) or contact an education advisor for more information.

Course Transfer Credit:

For information about receiving transfer credit for courses taken at either British Columbia or Alberta institutions, please see <https://www.bctransferguide.ca/> or <https://transferalberta.alberta.ca> . For more transfer credit information, please visit <https://www.cotr.bc.ca/Transfer>

All requests for course transfer credit from institutions in British Columbia or elsewhere should go to the College of the Rockies Enrolment Services office.

Textbook 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:

Resources available digitally through the online platform.

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

- setup a suitable webapp development environment;
- build a basic to advanced RESTful webapp back-end;
- build distributed capabilities into an MVC service-web application;
- use common representation/transport/application protocols for distributed systems;
- use a collaborative workflow and a shared code repository to develop an application in a team setting; and
- construct a valid and well-formed XML (eXtensible Markup Language) document, and constrain it with a DTD (Document Type Definition).

Course Topics:

- MVC distributed application framework
- RESTful webapp back-end
- XML (eXtensible Markup Language) document using DOM (Document Object Model) constraint
- Git and Gitflow (for code versioning)
- Representation/transport/application protocols for distributed system

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

Evaluation and Assessments

Assessment Type: On-Campus (face-to-face)

Assessment Type	% of Total Grade
Project	60%
Participation	10%
Final Exam	30%
Total	100%

Grade Scheme

A+	A	A-	B+	B	B-	C+	C	C-	D	F
>=90	89-85	84-80	79-76	75-72	71-68	67-64	63-60	59-55	54-50	<50

Evaluation Notes: A grade of “D” grants credit, but may not be sufficient as a prerequisite for sequential courses.

Evaluation Notes Comments:

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 Attendance:

Students must attend all scheduled exams at the appointed time and place. Instructors may approve an alternate exam to accommodate an illness or personal crisis. Department heads will consider other written requests. Any student who misses a scheduled exam without prior approval will receive a "0" on the exam.

Academic Policies:

College of the Rockies policies related to courses can be found at <https://cotr.bc.ca/about-us/college-policies/> and include the following:

- Policy 2.1.4 Course Audit
 - Policy 2.4.1 Credential Framework
 - Policy 2.4.3 Students with Documented Disabilities
 - Policy 2.4.4 Student Rights, Responsibilities and Conduct
 - Policy 2.4.8 Academic Performance
 - Policy 2.4.9 Student Feedback and Concerns
 - Policy 2.4.11 Storage of Academic Works
 - Policy 2.5.3 Student Appeal
 - Policy 2.5.5 Prior Learning Assessment and Recognition (PLAR)
-

Course Changes:

The College of the Rockies updates course outlines regularly to meet changing educational, employment and marketing needs. The instructor will notify students in writing of any updates to this outline during the semester. The instructor reserves the right to revise, add or delete material while meeting the learning outcomes of this course outline.