



Windows Interactive Application Programming – CIST 204

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 hands-on course students will build upon their previous generic programming courses to build graphical user interfaces and design Windows application software. The Windows platform is the predominant OS (Operating System) and it has a complex ecosystem for developing advanced GUI (Graphical User Interface)-based applications. Students will program with C# using .NET framework, XAML (eXtensible Application Markup Language), and Windows Forms to build industry standard GUI-rich applications with interesting and sophisticated backends.

It is important that student use modern programming constructs and well-known patterns such as classes and objects, interfaces, observers, abstract factories in their projects in this course.

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

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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 109

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

- design and develop graphical user interfaces (GUIs) for Windows applications;
 - utilize C# and the .NET framework to create industry-standard GUI-rich applications;
 - use XAML (eXtensible Application Markup Language) for GUI design;
 - implement Windows Forms for building interactive and visually appealing interfaces;
 - apply modern programming constructs, including classes, objects, interfaces, observers, and abstract factories, in software projects;
 - develop sophisticated backends for GUI-based applications; and
 - work within the complex ecosystem of Windows application development.
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COURSE TOPICS:

- C# Programming
- Microsoft .NET framework
- Windows Forms and Dialogs
- Windows controls including Form, TextBox, Button, and Label
- Visual Studio and MSDN Library
- Exception Handling
- Class Assembly and EXE in C#
- Input/Output (I/O) system
- .NET collection classes: LINQ, Lambdas, and Extension Methods

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	70%
Final Exam	<u>30%</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.