



DEPARTMENT OF SCIENCE

COURSE OUTLINE – WINTER 2021

CS 3010 (A3): User Interfaces 3 (3-0-2) 75 Hours for 15 Weeks

INSTRUCTOR: Ubaid Abbasi **PHONE:** 780-539-2976
OFFICE: C-427 **E-MAIL:** UAbbasi@gprc.ab.ca
OFFICE HOURS: Tuesday 1:30-2:30PM

WINTER 2021 DELIVERY: Mixed Delivery. This course is delivered remotely with some face-to-face/onsite components at the GPRC Grande Prairie campus.

- For the remote delivery components: students must have a computer with a webcam and reliable internet connection. Technological support is available through helpdesk@gprc.ab.ca.
- For the onsite components: students must supply their own mask and follow GPRC Campus Access Guidelines and Expectations (<https://www.gprc.ab.ca/doc.php?d=ACCESSGUIDE>). The dates and locations of the onsite components can be found on the Course Calendar.
- **Note:** GPRC reserves the right to change the course delivery.

CALENDAR DESCRIPTION:

This course is an introduction to the theory, design and programming of modern user interfaces. Topics will include human factors; interaction design; usability; software development with graphical user interfaces (GUI) for computers, game consoles and mobile devices; input and output devices (including game controllers).

PREREQUISITE(S)/COREQUISITE: CS2010

REFERENCE TEXT/RESOURCE MATERIALS:

- Designing the User Interface: Strategies for Effective Human-Computer Interaction (6th Edition) by B.Shneiderman et al. ISBN 9780134380384.
- Introduction to Java Programming by D. Liang. ISBN 10th Edition 0-13-376131-2.

DELIVERY MODE(S): In class and lab

COURSE OBJECTIVES:

This course introduces students to:

- The theory, design and programming of modern user interfaces.
- Human factors, interaction design, and usability.
- Software development with graphical user interfaces (GUI) for computers, game consoles and mobile devices.
- Input and output devices (including game controllers).

LEARNING OUTCOMES:

At the end of this course, students will gain the ability to:

- Discuss and explain how perception, memory and cognition pertain to designing human computer interfaces.
- Design and implement user interfaces using modern application programming interfaces (APIs) and toolkits.
- Design and implement graphical user interfaces for computers, game consoles and mobile devices.
- Design and implement software that interfaces with input and output devices, including game controllers.

TRANSFERABILITY:

Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at the Alberta Transfer Guide main page

<http://www.transferalberta.ca>.

**** Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability**

EVALUATIONS:

Assignments/Project	15%
Lab Quizzes	20%
Lab Exam	25%
Final Exam	40%

GRADING CRITERIA:

Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**.

Alpha Grade	4-point Equivalent	Percentage Guidelines	Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	90-100	C+	2.3	67-69
A	4.0	85-89	C	2.0	63-66
A-	3.7	80-84	C-	1.7	60-62
B+	3.3	77-79	D+	1.3	55-59
B	3.0	73-76	D	1.0	50-54
B-	2.7	70-72	F	0.0	00-49

COURSE SCHEDULE/TENTATIVE TIMELINE:

	Topics
Week 1-4	Usability, Guidelines and Theories <ul style="list-style-type: none"> • Usability and User Experience Goals • User Centred Design and Requirements Quiz 1
Week 5-9	Scenarios and Task Description <ul style="list-style-type: none"> • Ideation • Prototyping • Vision Midterm
Week 10-13	Design <ul style="list-style-type: none"> • Design Principles • Layout and Navigation • Evaluation Quiz 2
Week 14	Usability Testing <ul style="list-style-type: none"> • Usability • Experiments • Universal Design

	<ul style="list-style-type: none"> • Information Visualization
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STUDENT RESPONSIBILITIES:

Assignments are to be handed in and/or demonstrated in the scheduled lab on the due-date. Late assignments will not be accepted. Students will be eligible for a passing grade, only if they obtain 30 out of a possible 60 marks (on exams).

STATEMENT ON PLAGIARISM AND CHEATING:

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the Student Conduct section of the College Admission Guide at <http://www.gprc.ab.ca/programs/calendar/> or the College Policy on Student Misconduct: Plagiarism and Cheating at <http://www.gprc.ab.ca/about/administration/policies/> ****Note:** all Academic and Administrative policies are available on the same page.

Additional Information:

CS 3010 A3	Instructor	Room	Day	Time
Lecture	Ubaid Abbasi	Remote	Tuesday, Thursday	11:30 to 12:50
Lab	Ubaid Abbasi	A312	Friday	8:30 to 10:20