# THE UNIVERSITY OF WINNIPEG

## APPLIED COMPUTER SCIENCE

Course Number: ACS-3916-001
Course Name: Human-Computer Interaction
Course Webpage: https://nexus.uwinnipeg.ca/d2l/home/38438

## Instructor Information


**Instructor:** Jeanette Bautista
**E-mail:** je.bautista@uwinnipeg.ca


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|---|---|---|---|
| **Office Hours:** | Wednesdays | 1:00-2:00 pm | via **MS Teams** |
| **Class meeting time**: | Tuesdays/Thursdays | 10:00-11:15 | via **MS Teams** |

*Meeting info for office hours and class time will be posted on Nexus.*

## Important Dates

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|---|---|---|
| 1. | First Class: | Tuesday, September 7, 2021 (**Zoom**) |
| 2. | Truth and Reconciliation Day (no class): | Thursday, September 30, 2021 |
| 3. | Reading Week (no classes): | October 10-16 |
| 4. | Midterm Test: | Tuesday, October 26, 2021 |
| 5. | Remembrance Day (no class): | Thursday, November 11, 2021 |
| 6. | Final Withdrawal Date w/o academic penalty*: | Tuesday, November 16, 2021 |
| 7. | Last Class (make-up for statutory holiday): | Wednesday, December 8, 2021 |
| 8. | Project Presentations: | December 7 and 8, 2021 4:00-5:30 pm |
| 9. | Final Exam (Comprehensive): | TBD |
| 1. | University closures: Truth and Reconciliation Day | Thursday, September 30, 2021 |
| | Thanksgiving | Monday, October 11, 2021 |
| | Remembrance Day | Thursday, November 11, 2021 |

*A minimum of 20% of the work on which the final grade is based will be evaluated and available to the student before the voluntary withdrawal date.

## Course Objectives / Learning Outcomes

This course covers the fundamentals and concepts of design, implementation, and evaluation of human-computer interfaces. Topics include human cognitive aspects; user-centred design; design goals and principles; interface and interaction types; prototyping and construction; and evaluation methods. The design concepts are demonstrated using an interface development tool. In order to make a balance between theory and practice, emphasis is placed on a course end project involving design, implementation and evaluation of the user interface for a specific application.

## Remote Learning

The first lecture will be delivered via Zoom. Students will receive a notification for the ACS-3916 Team membership before the second lecture.

All course material including lecture notes, slides, assignment and project details will be available on Nexus.

Lectures will be delivered live during the scheduled times via MS Teams. No recordings will be posted or permitted.

- Students will access the meeting by signing into MS Teams with their UW O365 account
- Students must add a photo of themselves, an avatar, or an image of their name
- Use of video is optional but strongly encouraged
- Participants must be muted when not speaking
- Students may interact via chat, voice, or gestures

Students can find answers to frequently asked questions related to remote learning here: https://www.uwinnipeg.ca/covid-19/remote-learning-faq.html .

Note: A permitted or necessary change in mode of delivery may require adjustments to important aspects of course outlines, like class schedule and the number, nature, and weighting of assignments and/or exams.

## Evaluation Criteria

1. Assignments (20%)
   - Individual work
   - 2 assignments, worth 10% each
   - May include any or a combination of the following:
     - Theory, design, prototyping, analysis exercises

Assignment submissions:
All work is to be submitted electronically via Nexus. All prototypes must be submitted in the appropriate format, and all written work as PDF. Further details and submission procedure will be stated in each assignment.

Students are responsible for backing up and protecting their assignment work.

2. Final Project (20% )
    - Group work (5 students per group)
    - Due Dates:
        - Project Proposal: Week of October 5
        - Milestones 1&2: TBD
        - Final report/prototype: December 5
        - Presentation: December 7 & 8
            - Class time will be extended to 5:30 pm

Assignments and project deliverables will be accepted up to 1 day late with a 20% penalty.

Students are responsible for backing up and protecting their work.

Further information and dates to be posted on the course website.

Prototyping software will be used for this course. Balsamiq and UXPin will be introduced in assignments. Students may choose to use other tools for the course project with permission from the instructor.

3. Midterm Test (20%)
    - During the regular class time (see Important Dates)

4. Final Exam (40%)
    - Cumulative

*Students should contact the instructor as soon as possible* if extenuating circumstances require missing a lab, assignment, test or examination. A medical certificate from a practicing physician may be required before any adjustments are considered.

## Test / Exam Requirements

- Photo ID is required for midterm tests and the final exam.
- Midterm and final exams will be delivered via Nexus and proctored via **Zoom**. Students must have video capability, and video must be turned on for the duration of the exam for proctoring.
- Midterm and final exams are open book.
    - Students are permitted to view only the following authorized course material:

        - Class notes, slides, recordings, sample code, assignment descriptions and solutions posted by the instructor
        - Course textbook
        - Student's own course notes and assignment submissions
    - Students may use an external tool such as a text editor or IDE to write answers to questions before entering them into the exam
    - Students may contact the instructor to ask questions
    - External resources (or any material not listed above) are NOT PERMITTED
    - Communication with others (except the instructor) is NOT PERMITTED
    - All work must be entirely the students' own. Collaboration or sharing of work is NOT PERMITTED.

Students with documented disabilities, temporary or chronic medical conditions, requiring academic accommodations for tests/exams (e.g., private space) or during lectures/laboratories (e.g., note-takers) are encouraged to contact Accessibility Services (AS) at 204-786-9771 or accessibilityservices@uwinnipeg.ca to discuss appropriate options. All information about a student's disability or medical condition remains confidential.
https://www.uwinnipeg.ca/accessibility-services.

Students may choose not to attend classes or write examinations on holy days of their religion, but they must notify their instructors at least two weeks in advance. Instructors will then provide opportunity for students to make up work examinations without penalty. A list of religious holidays can be found in the 2019-20 Undergraduate Academic Calendar online at http://uwinnipeg.ca/academics/calendar/docs/important-notes.pdf

## Final Letter Grade Assignment

Historically, numerical percentages have been converted to letter grades using the following scale. However, instructors can deviate from these values based on pedagogical nuances of a particular class, and final grades are subject to approval by the Department Review Committee.

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|---|---|---|---|---|---|
| A+ | 90 – 100% | B+ | 75 – 79% | C | 60 – 64% |
| A | 85 – 89 % | B | 70 – 74% | D | 50 – 59% |
| A- | 80 – 84% | C+ | 65 – 69% | F | below 50% |

## Required Textbook / Reading List

- *Interaction Design: Beyond Human-Computer Interaction*, Preece, Rogers and Sharp, Wiley 5th Edition 2019
    - ISBN 978-1-119-54725-9 (print)
    - ISBN 978-1-119-54730-3 (ebook)
- Additional readings and material that are not covered by the textbook will be provided by the instructor

- Class Notes will be available on Nexus

## Prerequisite Information

- Prerequisites: A grade of at least C in ACS-2909(3) and ACS-2814(3) (or the former ACS2914(3))
- Restrictions: Students cannot hold credit in ACS-3916(3) and ACS-3816(3)

## Regulations, Policies, and Academic Integrity

Academic dishonesty is a very serious offense and will be dealt in accordance with the University's policies.

*Avoiding Academic Misconduct:* Students are encouraged to familiarize themselves with the Academic Regulations and Policies found in the University Academic Calendar at:
https://uwinnipeg.ca/academics/calendar/docs/regulationsandpolicies.pdf
Particular attention should be given to subsections 8 (Student Discipline), 9 (Senate Appeals) and 10 (Grade Appeals). Please note, in particular, the subsection of Student Discipline pertaining to plagiarism and other forms of cheating.

Detailed information can be found at the following:

- Academic Misconduct Policy and Procedures: https://www.uwinnipeg.ca/institutional-analysis/docs/policies/academic-misconduct-policy.pdf and https://www.uwinnipeg.ca/institutional-analysis/docs/policies/academic-misconduct-procedures.pdf
- UW Library video tutorial "Avoiding Plagiarism" https://www.youtube.com/watch?v=UvFdxRU9a8g

Uploading essays and other assignments to essay vendor or trader sites (filesharing sites that are known providers of essays for use by others who submit them to instructors as their own work) involves "aiding and abetting" plagiarism. Students who do this can be charged with Academic Misconduct.

*Non-academic misconduct.* Students are expected to conduct themselves in a respectful manner on campus and in the learning environment irrespective of platform being used. Behaviour, communication, or acts that are inconsistent with a number of UW policies could be considered "non-academic" misconduct. More detailed information can be found here:

- Respectful Working and Learning Environment Policy https://www.uwinnipeg.ca/respect/respect-policy.html,
- Acceptable Use of Information Technology Policy

https://www.uwinnipeg.ca/institutional-analysis/docs/policies/acceptable-use-of-information-technology-policy.pdf

- Non-Academic Misconduct Policy and Procedures: https://www.uwinnipeg.ca/institutional-analysis/docs/student-non-academic-misconduct-policy.pdf and https://www.uwinnipeg.ca/institutional-analysis/docs/student-non-academic-misconduct-procedures.pdf.

*Copyright and Intellectual Property.* Course materials are the property of the instructor who developed them. Examples of such materials are course outlines, assignment descriptions, lecture notes, test questions, and presentation slides—irrespective of format. Students who upload these materials to filesharing sites, or in any other way share these materials with others outside the class without prior permission of the instructor/presenter, are in violation of copyright law and University policy. Students must also seek prior permission of the instructor/presenter before, for example, photographing, recording, or taking screenshots of slides, presentations, lectures, and notes on the board. Students found to be in violation of an instructor's intellectual property rights could face serious consequences pursuant to the Academic Misconduct or Non-Academic Misconduct Policy; such consequences could possibly involve legal sanction under the Copyright Policy
https://copyright.uwinnipeg.ca/docs/copyright_policy_2017.pdf

## Privacy

Students have rights in relation of the collecting of personal data the University of Winnipeg: https://www.uwinnipeg.ca/privacy/admissions-privacy-notice.html.

More information:

- Zoom and Privacy: https://www.uwinnipeg.ca/privacy/zoom-privacy-notice.html
- Testing/Proctoring: https://www.uwinnipeg.ca/privacy/zoom-test-and-exam-proctoring.html.

## Class Cancellation, Correspondence with Students and Withdrawing from Course

When it is necessary to cancel a class due to exceptional circumstances, the course instructor will make every effort to inform students via uwinnipeg email and Nexus.

Students are reminded that they have a responsibility to regularly check their uwinnipeg e-mail addresses to ensure timely receipt of correspondence from the University and/or the course instructor**.**

Please let course instructor know if you plan on withdrawing from the course. Note that withdrawing before the VW date does not necessarily result in a fee refund.

## Topics to be covered (tentative)

1. Introduction to HCI
2. The process of Interaction Design
3. Conceptualizing Interaction
4. Interfaces
5. Cognitive Aspects
6. Data Gathering
7. Data analysis, Interpretation, and Presentation
8. Discovering requirements
9. Design, Prototyping, and Construction
10. Evaluation
11. Social and Emotional Interaction
12. Special Topics in HCI (time permitting)