

Carleton University, Ottawa, Canada
Master of Human-Computer Interaction
Course Outline 2022

Course number and title:

HCIN 5200 (0.5 credit): Software and User Interface Development

Instructor:

Robert Biddle

Email Address: robert.biddle@carleton.ca

Office Location: HP 5169 (or Lab: HCI2110)

Office Phone: 520-2600 extension 6317 (but please email instead)

Office Hours: Drop-in or by email arrangement

Primary method of contact: Email.

Meetings:

Term: Fall, 2022

Times: 14:35–17:25 Thursday, September 8 – December 8;

But not Oct 27 (Fall Break)

Meetings will be held in person in Southam Hall Room 408. There will also be technical workshops on practical topics, to be scheduled at times convenient to everyone.

IMPORTANT: Covid-19 is still a reality, so please stay home if you feel sick. Class and workshop participation online via Zoom will be available when necessary. Access details are provided on brightspace.carleton.ca

Online Resources:

All course papers and other resources will be available online via Brightspace:

<https://brightspace.carleton.ca>

The Brightspace course site also includes a forum for announcements and for discussion.

Overall Course Objective:

Students completing this course should have a deep understanding of major UI interaction frameworks, their rationale, and their use. Main topics will include major areas such as: UI Styles; Xerox Star legacy; Hypertext, World Wide Web; Mobile and Immersive UI Design; Post-GUI Interaction (e.g. multi-touch or sensor-based); Software System Architecture; Software Development Processes.

Instructor's Statement:

This course is intended both as a review and an introduction to the essentials of user interaction technology and development, and a advanced consideration of future directions. The major styles will be examined and discussed, and exercises will be provided involving creation of sample software using open-source cross-platform tools. The practical context of UI development will also be examined, including software architecture and software development process, especially Agile development.

Learning Outcomes:

1. Understand, compare, and apply the major computer interface style frameworks, their rationale, advantages and disadvantages.
2. Understand, compare, and apply the programming implementation paradigms for the major computer interface styles.
3. Understand software development process and architecture, and its implications for user interaction design and development
4. Understand, present and discuss papers on novel interaction from the HCI literature, identifying the key ideas, their justification and implications.

Assessment:

Project 1: UI design exploration project: 40% (Due Oct 30th)

Project 2: Literature review or software project: 40% (Due Dec 22nd)

Paper presentation, discussion, and workshop participation: 20%

Assessment of Outcome #1 will be based on Project 1, requiring students to design several interfaces using different styles for the same domain functionality, discuss the impact of the styles, compare the implications of the styles on likely user interaction, and suggest deeper issues involved.

Assessment of Outcome #2 will be based on participation in Workshops to apply programming and web development frameworks to implement sample software applications.

Assessment of Outcome #3 will be based on Project 2 requiring students to compare and discuss a novel aspect in interaction design and implementation by study of a selected set of related papers from the HCI literature.

Assessment of Outcome #4 will be based on students presenting papers from the assigned readings from the literature, and contributions to discussion. Students are expected to read all papers, and to volunteer taking turns to present papers and lead discussions.

There will be no formal examination for this course.

Textbooks:

There will be no set textbook. Instead, papers from the literature and online resources will be made available as appropriate.

Academic Integrity:

Carleton University demands academic integrity from all its members. The Academic Integrity Policy governs the academic behaviour of students. Academic Integrity is defined as: “A commitment even in the face of adversity to five fundamental values: honesty, trust, fairness, respect, and responsibility.” (Centre for Academic Integrity, 1999)

Academic dishonesty, in whatever form, is destructive to the values of the university, and risks harming the university’s reputation as place of learning and innovation. Furthermore, it is unfair and discouraging to those students who pursue their studies honestly.

Further details are available at: <https://carleton.ca/registrar/academic-integrity/>
The full policy is available on the Senate website: <https://carleton.ca/senate/senate-policies/>.

In particular, please note the following:

Plagiarism: As defined by Senate, “plagiarism is presenting, whether intentional or not, the ideas, expression of ideas or work of others as one’s own”. Such reported offences will be reviewed by the office of the Dean of Science.

Unauthorized Co-operation or Collaboration: Senate policy states that “to ensure fairness and equity in assessment of term work, students shall not co-operate or collaborate in the completion of an academic assignment, in whole or in part, when the instructor has indicated that the assignment is to be completed on an individual basis”.

Academic Accommodation:

Carleton provides academic accommodation to students for reasons of disability, religious observance, pregnancy and/or parental leave, sexual violence, and student activities.

Providing accommodations simply means providing alternatives to students who cannot perform the essential requirements of their academic programs due to the reasons mentioned above. At no time does academic accommodation undermine or compromise the learning objectives that are established by the academic authorities of the university.

For more information on academic accommodation, please contact the departmental administrator or visit: <https://students.carleton.ca/course-outline>

Covid-19:

It is important to remember that COVID is still present in Ottawa. The situation can change at any time and the risks of new variants and outbreaks are very real. There are number of actions you can take to lower your risk and the risk you pose to those

around you including being vaccinated, wearing a mask, staying home when you're sick, washing your hands and maintaining proper respiratory and cough etiquette.

Feeling sick? Remaining vigilant and not attending work or school when sick or with symptoms is critically important. If you feel ill or exhibit COVID-19 symptoms do not come to class or campus. If you feel ill or exhibit symptoms while on campus or in class, please leave campus immediately. In all situations, you must follow Carleton's symptom reporting protocols.

Masks: Carleton has paused the COVID-19 Mask policy, but continues to strongly recommend masking when indoors, particularly if physical distancing cannot be maintained. It may become necessary to quickly reinstate the mask requirement if pandemic circumstances were to change.

Vaccines: While proof of vaccination is no longer required as of May 1 to attend campus or in-person activity, it may become necessary for the University to bring back proof of vaccination requirements on short notice if the situation and public health advice changes. Students are strongly encouraged to get a full course of vaccination, including booster doses as soon as they are eligible, and submit their booster dose information in cuScreen as soon as possible.

Please note that Carleton cannot guarantee that it will be able to offer virtual or hybrid learning options for those who are unable to attend the campus. All members of the Carleton community are required to follow requirements and guidelines regarding health and safety which may change from time to time. For the most recent information about Carleton's COVID-19 website (<https://carleton.ca/covid19/>) and review the Frequently Asked Questions (FAQs). Should you have additional questions after reviewing, please contact covidinfo@carleton.ca.

Doctor's note or medical certificate

In effect for Fall 2022 term, in place of a doctor's note or medical certificate, students are advised to complete the self-declaration form available on the Registrar's Office website to request academic accommodation for missed course work including exams and assignments:

<https://carleton.ca/registrar/wp-content/uploads/self-declaration.pdf/>

Students should also discuss with the course instructor the required accommodations arising from the COVID-19 situation.