

What is it?

This course introduces students to techniques to work in groups on software projects, do collaborative design in which students will identify, evaluate and refine important aspects of existing and new designs in the context of discussed problems.

CIS*2250

Software Design II

Land Acknowledgement

The University of Guelph rests on the territory of the Mississaugas of the Credit. While these words cannot remedy the historical injustices committed here, we recognize and acknowledge them, with the intention of a fairer future. This is the land of the Treaty of the Dish with One Spoon, and in that understanding, we acknowledge, respect, and share the resources around us and the ideas within us. We recognize that the value of our coming together in this place is to work to benefit all, and fairly share in the rewards.

Skills



Mind Map of Group Work + Programming,

Communication, Understanding Data,

Software Tools and Design Analysis

Instructors

A. Hamilton-Wright,
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Reynolds 2223

Courselink

courselink.uoguelph.ca

Meetings

Class: 9:30-10:20 **or**
1:30-2:20 M/W/F

Labs (2hr):
Mon @ 7pm,
Wed @ 10:30,
Thu @ 7pm,
Fri @ 10:30
You must attend your
assigned lab section.

Parenting in the Classroom

This classroom welcomes anyone needing to breastfeed children, and acknowledges and celebrates that parenting is a community task.

Books

- T. Brown **Change by Design, Revised and Updated: How Design Thinking Transforms Organizations and Inspires Innovation** 2019
Harper Business. ISBN: 978-0-062-85662-3
- C. Rudder **Dataclysm** 2015
Broadway Books. ISBN: 978-0-385-34739-6
- A. Hamilton-Wright, K. Raymond, &
D.A. Stacey **Collaborative Design Fundamentals For Software Engineers: Online Textbook for CIS*2250** 2020
University of Guelph, School of Computer Science

Grading Breakdown: Revised - changes in bold

Assignments:				30 %
Lab	Weeks 2-6	10 %		
Team	Week 5	10 %		
Individual	Week 10	10 %		
Team Project:				30 %
Milestones due	Weeks 8,9,11	(2 ×) 15 %		
Examinations:				40 %
Quizzes	Weeks 2-5,8-11 (altogether)	10 %		
Midterm	Week 7 ¹	15 %		
Final	Online Textbook component²	5 %		
	Design Challenge and perl component³	10 %		
Total:				100 %

A student must attempt all three major course elements (Assignments, Team Project and Examination) and achieve a passing grade (50%) in each element. If > 50% is achieved in all elements, the final grade assigned will be the weighted average of all grades as per the table above. Otherwise, the final grade will be the lesser of the weighted average above and the minimum grade in any failing element.

¹Update (Jan 5): The midterm has been scheduled for February 28, beginning at 6pm, in the J.D. MacLachlan building room 102.

²To be completed before 5pm in Week 12; available via CourseLink

³Completed as a ``take-home exam'' to be scheduled during the exam period.

Learning Outcomes

Students successfully completing this course will be able to:

- critically assess design ideas found in contemporary everyday use;
- critically assess the utility and implementation of design ideas; within the context of simple programs, tabular and record based data, and human interface examples;
- create and critique software designs for file based data analysis tasks
- select appropriate software tools for a variety of data-driven tasks;
- cooperate and contribute to team-driven software projects;
- establish a professional working relationship based around team-based design;
- evaluate, manage and push forward common projects towards a team-based goal;
- analyze, critically evaluate and iteratively improve their own and their team-members participation in group-based work; and
- evaluate program code produced by themselves and others.

Deadlines and Submitting Work

All assignments will be submitted electronically through Courselink. **All deadlines fall at the beginning of class** on the day indicated in the case of submitted material. Demonstrations are due during your lab time. Materials are not accepted after the indicated date and time.

Labs

Labs prior to the midterm will have a graded lab exercise that is expected to be completed in the lab time while working in pairs. Lab time held after the midterm will be used to assess milestones in the work towards the group project. A final grade for the project is assigned based on demonstrations done by the group during labs in week 8, 9 and 11, with the final demonstration of the completed project in week 11.

Code of Conduct

Our learning environment must be a friendly, safe and welcoming environment for all, regardless of ethnicity, gender, sexual orientation, age, ability, socioeconomic status, and religion (or lack thereof). As we wish to facilitate and encourage the fullest participation from everyone, this code of conduct outlines the expectations for all participants (including the instructor and other staff).³ This policy is aligned with the larger University policy on Non-Academic Misconduct.

Expected Behaviour

Participate in an authentic and active way. In doing so, you contribute to the health and value of this community.

Exercise consideration and respect in your speech and actions.

Attempt collaboration before conflict.

Refrain from demeaning, discriminatory, or harassing behaviour and speech.

Be mindful of your surroundings and of your fellow participants.

Alert community leaders (e.g., teaching staff) if you notice a dangerous situation, someone in distress, or violations of this Code of Conduct, even if they seem inconsequential.

Citizenship and Participation

Communities mirror the societies in which they exist and positive action is essential to counteract the many forms of inequality and abuses of power that exist in society.

If you see someone who is making an extra effort to ensure our community is welcoming, friendly, and encourages all participants to contribute to the fullest extent, we want to know.

Unacceptable Behaviour

Unacceptable behaviours include: intimidating, harassing, abusive, discriminatory, derogatory or demeaning speech or actions by any participant in our community, either in person, online, at any related events, or in one-on-one communications carried out in the context of community business.

Harassment includes: harmful or prejudicial verbal or written comments related to race, religion, disability, sex, gender, sexual orientation; inappropriate use of nudity and/or sexual images in public spaces (including computer labs and presentation slides); deliberate intimidation, stalking or following; harassing photography or recording; sustained disruption of talks or other events; inappropriate physical contact, and unwelcome sexual attention.

³This code of conduct is based upon the citizen code of conduct available via <http://citizencodeofconduct.org/>, and is distributed under a Creative Commons Attribution-ShareAlike license (<http://creativecommons.org/licenses/by-sa/3.0/>)

Inclusion and Accessibility

We are committed to an open and inclusive environment in this course.

Students with accessibility needs are invited to discuss how your needs may best be met with the instructor. This complements any discussion or accommodation presented through Student Accessibility Services (uoguelph.ca/sas).

In particular, anyone who finds barriers to inclusion in the classroom, regardless of the reason, are invited to discuss the situation with the instructor or other teaching staff.

Pre-Requisites

CIS*1250, CIS*1300

Restrictions

Restricted to BCOMP.SENG majors

A noteworthy example: **group members are not obligated to go on dates, and asking for this will be viewed as sexual harassment.**

Consequences of Unacceptable Behaviour

Unacceptable behaviour from any community member, including the course instructor and those members with decision-making authority, will not be tolerated.

Anyone asked to stop unacceptable behaviour is expected to comply immediately.

If a community member engages in unacceptable behaviour, action will be taken to ensure that such behaviour ends, beginning with action on the part of the course instructor, and escalating if necessary.

Additional information on University policy regarding harassment, conduct and human rights is available at the University Human Rights Office.

If You Witness or Are Subject to Unacceptable Behaviour

If you are subject to or witness unacceptable behaviour, or have any other concerns, please notify the course instructor as soon as possible.

If you feel that the course instructor cannot or will not provide remedy for the situation, please contact any of these alternate resources:

Associate Director (Undergraduate) <ugraddir@socs.uoguelph.ca>

Director of the School <director@socs.uoguelph.ca>

Associate Dean (Academic) <cpesada@uoguelph.ca>

Office of Diversity and Human Rights <dhinfo@uoguelph.ca> or extension **53000**

Campus Community Police at extension **52245**

Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study. Faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

In particular, **it is your responsibility** to accurately and clearly indicate the work of any and all contributing people, including yourself, in all presented and submitted materials. By handing in any work for this (or any) course, unless you have specifically identified any other authorship, **you are claiming that the sole authorship is your own**. Including work from any other person without directly indicating the source of such work constitutes academic fraud of some type.

If you have any questions about what academic fraud such as plagiarism entails, or about any other forms of academic misconduct, please ask your course instructor.

University Wide Course Outline Information

Winter 2020

1 Email Communication

As per university regulations, all students are required to check their e-mail account regularly: e-mail is the official route of communication between the University and its students.

2 When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

- Undergraduate Calendar - Academic Consideration and Appeals
- Graduate Calendar - Grounds for Academic Consideration
- Associate Diploma Calendar - Academic Consideration, Appeals and Petitions

3 Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all students (undergraduate, graduate and diploma) except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional

and alternative delivery) students. The regulations and procedures for course registration are available in their respective Academic Calendars.

- Undergraduate Calendar - Dropping Courses
- Graduate Calendar - Registration Changes
- Associate Diploma Calendar - Dropping Courses

4 Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to re-submit work at any time.

5 Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to book their exams at least 7 days in advance and not later than the 40th Class Day.

- For Guelph students, information can be found on the SAS website
<https://www.uoguelph.ca/sas>
- For Ridgetown students, information can be found on the Ridgetown SAS website

6 Academic Integrity

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- Undergraduate Calendar - Academic Misconduct
- Graduate Calendar - Academic Misconduct

7 Recording of Materials

Presentations that are made in relation to course work - including lectures - cannot be recorded or copied without the permission of the presenter, whether the

instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

8 Resources

The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs.

- Academic Calendars
<https://www.uoguelph.ca/academics/calendars>