



# ENGG\*4080 Micro and Nano-Scale Electronics

01

Fall 2021

Section(s): C01

School of Engineering

Credit Weight: 0.50

Version 2.00 - September 08, 2021

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## 1 Course Details

### 1.1 Calendar Description

The purpose of this course is to describe the operating principles of analog integrated micro and nano electronic circuits and to teach how to design and use such circuits systems. Course topics include: device and circuit fabrication in silicon and non-silicon based technologies; operation and layout of active and passive elements; analog and switched-capacitor filters; analog-to-digital and digital-to-analog converters; amplifiers; oscillators and circuits for radio-frequency and optical communications; readout channels for integrated sensors, and analog integrated circuits for mechatronics and bioengineering. The main emphasis is on device models, circuit operation, and design techniques.

**Pre-Requisites:** ENGG\*3450

### 1.2 Course Description

This course provides students with an opportunity to learn about the fundamental ideas and techniques behind the development of integrated circuits and systems. A primary objective of this course is to give students hands-on design experience with application-specific integrated circuits.

### 1.3 Timetable

#### Lectures

Wednesday 14:30–17:20 AD-S

#### Tutorial/laboratory sessions

**Section 0101:** Monday 15:30–17:20 [RICH](#) 2531

**Section 0102:** Tuesday 14:30–16:20 [RICH](#) 2531

**Section 0103:** Thursday 12:30–14:20 [RICH](#) 2531

Some tutorial/laboratory sessions will be in AD-S format as needed.

## 1.4 Final Exam

There is no final exam.

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## 2 Instructional Support

### 2.1 Instructional Support Team

<b>Instructor:</b>	Stefano Gregori
<b>Email:</b>	sgregori@uoguelph.ca
<b>Telephone:</b>	519-824-4120 ext. 56191
<b>Office:</b>	RICH 3521
<b>Office Hours:</b>	Wednesday, 17:30–18:20

<b>Lab Co-ordinator:</b>	Haleh Vahedi
<b>Email:</b>	hvahedi@uoguelph.ca
<b>Telephone:</b>	519-824-4120 ext. 54741
<b>Office:</b>	RICH 1509

### 2.2 Teaching Assistants

<b>Teaching Assistant (GTA):</b>	Swathi Makadia
<b>Email:</b>	smakadia@uoguelph.ca

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## 3 Learning Resources

### 3.1 Required Resources

#### Course webpage (Website)

Course materials, announcements, and grades will be posted to the course webpage on [CourseLink](#). You are responsible for checking the site regularly.

#### Textbook (Textbook)

T. C. Carusone, D. Johns and K. Martin, [Analog integrated circuit design](#), Wiley, 2nd ed., 2012, [TK7874 .J65 2012](#)

### 3.2 Recommended Resources

#### Readings (Readings)

Readings from the textbook will be posted on the course webpage. The readings are

assigned with the intention that you will read them before class, so that you will be prepared to discuss the concepts and follow the examples presented in class.

#### **Lecture materials (Notes)**

Lecture materials will be available on the course webpage. The notes are prepared with the intention that you will take additional notes and write down examples in class. Attendance at lectures is expected, because we will discuss concepts and interpretations that are not present on the course webpage or in other resources.

#### **Problem sets (Other)**

Problem sets will be available on the course webpage. The problems are selected with the intention that you will solve them throughout the term as a way to reinforce and self-assess your understanding of the topics in the course. You are expected to participate in the solution of some of the suggested problems during the tutorials.

#### **Laboratory manuals (Lab Manual)**

Laboratory manuals will be posted on the course webpage. The manuals are prepared with the intention that you will read them before each laboratory session to be ready for a safe and successful activity, and that you will consult them during the laboratory while taking your own notes. Attendance at laboratories is mandatory.

### **3.3 Additional Resources**

#### **Recommended books for consultation (Textbook)**

F. Maloberti, [Understanding microelectronics: a top-down approach](#), Wiley, 2012, [TK7874 .M253 2012](#)

#### **Library resources (Textbook)**

The textbook and the reference book above are available from the [University Bookstore](#) (in printed or digital form) and are on [Course Reserve](#) (in printed form at the Reserve Collection desk in the library). Additional references are indexed by library call numbers TK7800 to TK8360.

#### **Laboratory resources (Other)**

Laboratory resources including the Mosis Scalable CMOS Design Rules will be posted on the course webpage.

## **4 Learning Outcomes**

This course introduces the fundamental ideas, techniques and tools in analysis and design of integrated circuits in CMOS technology. The main operating principles and performance characteristics are illustrated in order to understand how to apply the studied concepts to the analysis and design of micro and nano-scale circuits. The course also encourages originality and innovation in the application of knowledge with the development of a design project using industry-grade design tools.

### **4.1 Course Learning Outcomes**

By the end of this course, you should be able to:

1. Understand the basic properties of integrated circuits in order to evaluate them and recognize their limits.
2. Describe the main characteristics of integrated circuits in order to assess a parameter or to generate test signals for performance evaluation.
3. Define circuit building blocks; modify and interconnect them for obtaining given functions.
4. Read circuit schematic and layout diagrams to identify critical points and estimate performance constraints.
5. Apply electronic-design-automation tools to model, design, verify, and improve blocks and systems.
6. Recognize the importance of individual and teamwork contributions to the integrated-circuit design flow.
7. Identify terms, models, and technological parameters to communicate about specifications, designs, and applications.

## 4.2 Engineers Canada - Graduate Attributes (2018)

Successfully completing this course will contribute to the following:

#	Outcome	Learning Outcome
1	Knowledge Base	1
1.1	Recall, describe and apply fundamental mathematical principles and concepts	1
1.2	Recall, describe and apply fundamental principles and concepts in natural science	1
1.3	Recall, describe and apply fundamental engineering principles and concepts	1
1.4	Recall, describe and apply program-specific engineering principles and concepts	1
2	Problem Analysis	2
2.1	Formulate a problem statement in engineering and non-engineering terminology	2
2.2	Identify, organize and justify appropriate information, including assumptions	2
2.3	Construct a conceptual framework and select an appropriate solution approach	2
2.4	Execute an engineering solution	2

#	Outcome	Learning Outcome
2.5	Critique and appraise solution approach and results	2
3	Investigation	3
3.1	Propose a working hypothesis	3
3.2	Design and apply an experimental plan/investigative approach (for example, to characterize, test or troubleshoot a system)	3
3.3	Analyze and interpret experimental data	3
3.4	Assess validity of conclusions within limitations of data and methodologies	3
4	Design	4
4.1	Describe design process used to develop design solution	4
4.2	Construct design-specific problem statements including the definition of criteria and constraints	4
4.3	Create a variety of engineering design solutions	4
4.4	Evaluate alternative design solutions based on problem definition	4
4.5	Develop and refine an engineering design solution, through techniques such as iteration, simulation and/or prototyping	4
5	Use of Engineering Tools	5
5.1	Select appropriate engineering tools from various alternatives	5
5.2	Demonstrate proficiency in the application of selected engineering tools	5
5.3	Recognize limitations of selected engineering tools	5
6	Individual & Teamwork	6
6.2	Understand all members' roles and responsibilities within a team	6
6.3	Execute and adapt individual role to promote team success through, for example, timeliness, respect, positive attitude	6
7	Communication Skills	7
7.2	Interpret technical documentation such as device specification sheets, drawings, diagrams, flowcharts, and pseudocode	7
7.3	Construct the finished elements using accepted norms in English, graphical standards, and engineering conventions, as appropriate for the message and	7

#	Outcome	Learning Outcome
	audience	

## 5 Teaching and Learning Activities

### 5.1 Lectures

Week	Dates	Lecture topics	References	Outcomes
1	Sep. 6–10	No class scheduled	—	—
2	Sep. 13–17	Integrated circuits and modelling	ch. 1	1, 2, 7
3	Sep. 20–24	Integrated-circuit fabrication and layout	ch. 2	1, 4, 7
4	Sep. 27–Oct. 1	Current mirrors and amplifiers	ch. 3	1, 2, 3
5	Oct. 4–8	Frequency response	ch. 4	2, 3, 4, 7
6	Oct. 11–15	Feedback amplifiers	ch. 5	2, 3, 4, 7
7	Oct. 18–22	Op amp design and compensation	ch. 6	2, 3, 4, 7
8	Oct. 25–29	Review	—	—
9	Nov. 1–5	Midterm	—	—
10	Nov. 8–12	Design process and electronic design automation tools	—	5, 6, 7
11	Nov. 15–19	IC design project	—	5, 6, 7
12	Nov. 22–26	IC design project	—	5, 6, 7
13	Nov. 29–Dec. 3	IC design project	—	5, 6, 7

Topics schedule will be adjusted throughout the course as needed.

### 5.2 Laboratories/Tutorials

Week	Dates	Topics	Due date	Outcomes
1	Sep. 6–10	No tutorial/lab scheduled	—	—
2	Sep. 13–17	Laboratory introduction and Tutorial 1 with assignment	Sep. 24	1, 2
3	Sep. 20–24	Laboratory 1 with report	Oct. 1	3, 5

4	Sep. 27–Oct. 1	Tutorial 2 with assignment	Oct. 8	1, 2
5	Oct. 4–8	Laboratory 2 with report	Oct. 15	3, 5
6–7	Oct. 11–15, Oct. 18–22	Tutorial 3 with assignment	Oct. 27	1, 2
7–8	Oct. 18–22, Oct. 25–29	Laboratory 3 with report	Nov. 10	4, 5
8–9	Oct. 25–29, Nov. 1–5	Review tutorial	–	–
9–10	Nov. 1–5, Nov. 8–12	Laboratory 3 (continued)	–	–
10–11	Nov. 8–12, Nov. 15–19	IC design project with report	Dec. 7	5, 6, 7
11–12	Nov. 15–19, Nov. 22–26	IC design project (design review)	Assigned slot in W11–12	5, 6
12–13	Nov. 22–26, Nov. 29–Dec. 3	IC design project (continued)	–	–
13	Nov. 29–Dec. 3	IC design project (design presentation)	Assigned slot in W13	6, 7

Topics schedule will be adjusted throughout the course as needed.

### 5.3 Other Important Dates

Thursday, 9 September 2021: First day of class

Monday, 11 October 2021: Holiday (i.e. no classes scheduled)

Tuesday, 12 October 2021: Study break day (i.e. no classes scheduled)

Thursday, 2 December 2021: Tuesday schedule in effect

Friday, 3 December 2021: Monday schedule in effect, last day of class, drop date

Please consult the Undergraduate Calendar to verify the schedule of dates for this term:

<https://calendar.uoguelph.ca/undergraduate-calendar/schedule-dates/>

Please consult the Undergraduate Calendar to find information about dropping courses:

<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/dropping-courses/>

## 6 Assessments

### 6.1 Marking Schemes & Distributions

## Final grade (100%)

From 0 to 100 with the following interpretation: 80–100 → A (excellent), 70–79 → B (good), 60–69 → C (acceptable), 50–59 → D (minimally acceptable), 0–49 → F (fail). The pass grade is 50.

In order for your design project mark to count towards the final grade, you must complete the midterm exam and all the laboratories, your grade in the midterm must be  $\geq 50\%$  and your average grade in the laboratories must be  $\geq 50\%$ .

In order for your marks to be recorded correctly, your Zoom, Teams, and Crowdmark accounts must be associated to your University email address, and you must sign in to the learning-management and distance-learning tools using your first and last name as written on your student identification card. You are expected to use the CourseLink integration to enter Zoom meetings and to sign in to Crowdmark because this facilitates the process. Submissions that cannot be attributed conclusively will not be graded; attendance and participation marks that cannot be attributed conclusively will not be recorded.

Name	Scheme A (%)
Participation and contribution	8
Assignments	12
Midterm exam	20
Laboratory reports	30
IC design project	30
Total	100

## 6.2 Assessment Details

### Participation and contribution (8%)

#### Learning Outcome: 1

You will receive marks for answering polls, solving problems, asking questions, and taking part in break-out rooms and other online course activities as a way to assess your participation and contribution to the collective learning endeavour during the lectures in weeks 2, 3, 4, 5, 6, 9 and 10, and the design project presentations in week 13. Additional information will be discussed in the first class.

### Assignments (12%)

#### Learning Outcome: 1, 2

Your ability to apply course concepts will be assessed by solving assigned problems, which will be equally weighted. Please see section 5.2 and the course webpage for schedule and due dates.

### Midterm exam (20%)

**Date:** Wed, Nov 3, 2:30 PM - 4:20 PM

**Learning Outcome:** 1, 2, 3, 4

The midterm exam will include all the material covered in lectures and tutorials to-date. Please verify time and modality on the course webpage.

**Laboratory reports (30%)**

**Learning Outcome:** 3, 4, 5

Your proficiency with electronic-design-automation tools will be assessed with three laboratory reports equally weighted. Please see section 5.2 for schedule and due dates.

**IC design project (30%)**

**Learning Outcome:** 5, 6, 7

The IC design project will be assessed through a design review (worth 5%) in week 11–12 (during the time slot assigned to you), a design presentation (worth 5%) in week 13 (during the time slot assigned to you) and a design report (worth 20%) due in week 14. Please see section 5.2 and the course webpage for schedule and due dates.

## 6.3 Course Grading Policies

**Failure to complete a course requirement:**

If you are unable to meet an in-course requirement due to medical, psychological, or compassionate reasons, please advise the course instructor in writing (with your name, student number and email contact) before the assessment time or submission due date. Please see the undergraduate calendar for information on regulations and procedures for academic consideration:

<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-consideration-appeals-petitions/>

**Accommodation of religious obligations:**

If you are unable to meet an in-course requirement due to religious obligations, please email the course instructor within two weeks of the start of the semester to make alternate arrangements. Please see the undergraduate calendar for information on regulations and procedures for academic accommodation of religious obligations:

<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-accommodation-religious-obligations/>

**Missed midterm:**

Any student not taking the midterm exam will receive a grade of zero. In case you have a legitimate reason for missing the midterm exam, the instructor may consider an accommodation upon presentation of a written request and suitable documentation before the time of the exam.

**Missed assessments:**

Any student not submitting an assessment will not receive a grade for it. There are no makeup assessments.

**Laboratory work:**

Attendance is mandatory for your laboratory reports to be accepted for marking. There are no laboratory exemptions or makeup laboratory sessions. In case you have a legitimate reason for missing a session, the instructor may consider an accommodation upon presentation of a written request and suitable documentation before the time of the session.

**Project work:**

Attending the design-review and design-presentation sessions is mandatory for your project report to be accepted for marking. In case you have a legitimate reason for missing a session, the instructor may consider an accommodation upon presentation of a written request and suitable documentation before the time of the session.

**Late laboratory and project reports:**

Any student not handing in a report will receive a grade of zero for that submission. In case you have a legitimate reason for missing a submission deadline, the instructor may consider an accommodation upon presentation of a written request and suitable documentation before the submission deadline.

**Submissions' compliance and back-up copies:**

When you upload a submission to the course webpage or through Crowdmark, you have to verify that the file meets the requirements, is readable, and is the one you intended to upload. Non-complying submissions, including late or incomplete submissions, will not be accepted for marking. Please keep reliable back-up copies of all your submissions, because you may be asked to resubmit your work.

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## 7 Course Statements

### 7.1 Communication and Email Policy

Communication is through announcements during the lectures. Some information will be posted on the course webpage or sent via email messages to your University address. It is your responsibility to keep yourself informed about the course.

Please use lectures, tutorials and laboratory sessions as your main opportunity to receive information about the course. Please connect to the instructional team during the office hours when you have specific questions about concepts, problem sets, and laboratory experiments, and any question that cannot be answered easily or briefly with a reply email.

The course email policy is as follows:

- Use your University email account for correspondence relating to the course.
- Start the subject header with the course identifier "ENGG\*4080" and add the topic of your message.
- Include a clearly written message and your name and student number.
- If you followed the instructions above, you will normally receive a reply in a timely manner (with the exception of nights, weekends, and holidays). If you do not receive a reply within two days, please resubmit your question or phone.

## 7.2 Relationships With Other Courses

### Previous courses

#### **ENGG\*3450:**

Semiconductors materials, pn junctions, semiconductor diodes, MOS transistors, small-signal operation and models, gain stages, logic gates.

### Follow-on courses

#### **ENGG\*4550:**

VLSI digital circuits, static and dynamic CMOS gates, static and dynamic latches, registers, pipelining, adders, multipliers, shifters.

#### **ENGG\*4560:**

Embedded system design, hardware/software abstractions, system-on-chip design and integration, embedded and distributed circuit architectures.

#### **ENGG\*4200:**

Wireless sensor networks, sensor characteristics, interface electronic circuits, data acquisition.

## 7.3 Recommendations About Studying

You are encouraged to spread the learning periods over the entire term (e.g. it is a good idea to start studying from today). Try to avoid distractions while studying and during lectures and laboratory sessions. Take notes and outlines while reading or listening. Work on the assigned readings and problems regularly. Note down the questions and doubts that arise and get

clarifications at the earliest possible time.

## 7.4 Recommendations About Obtaining Help

You can obtain help from the instructor during the office hours and from the laboratory technicians and the teaching assistants during the laboratory and tutorial time slots.

Please contact the instructor if you need help or you have fallen behind in your work. He is willing to put in as much effort to help you as you are willing to put in to help yourself. He is happy to work with you on difficult concepts and to hear your suggestions for improving the course. If you are busy during his office hours, then email him with some days and times you are free, and he will set an appointment that works for both you and him.

If you are struggling to succeed academically, you are encouraged to use the resources offered by the Learning Commons, including learning groups, workshops about study skills and time management, and appointments with a learning specialist. If you are ill, please call the Student Health Services or a medical doctor. If you have emotional, family, or living environment problems that affect your ability to study, please visit the Counselling Services or your academic advisor. If you have a physical or learning disability, please refer to the Student Accessibility Services. If you have other well-being concerns, please contact the Student Wellness Centre. You are encouraged to use the available services and programs, and you are welcome to discuss with the instructor your specific learning needs in this course at the earliest possible time.

## 7.5 Recommendations About Laboratory Policies

When you are in the laboratory [RICH 2531](#), you have to follow the posted policies at all times, which include not letting unauthorized people in, not sharing your student ID card or your credentials, not wedging the laboratory doors open, and not bringing food or drinks in the laboratory.

When you access computing resources, in person or remotely, you have to comply with the Acceptable Use Policy for information technology. Accordingly, you should not break licensing, copyright, or intellectual property provisions. You should not copy software, files, or data from the university information technology resources without due permission. You should not access someone else's computer account and should not allow others to access your own.

If you will access the laboratory in person, you must attend the mandatory safety orientation. Whenever you are in the laboratory, you have to use good judgement and safe working habits. In case of doubts about laboratory procedures, you must consult with the laboratory coordinator. Please be advised that any violation of laboratory policies may result in loss of laboratory privileges.

## 7.6 Recommendations about academic integrity

Maintaining academic integrity is simple: you must not engage in any activity that will dishonestly improve your results or dishonestly improve or hurt the results of others. However, since the value of your academic degree will depend on the integrity of your work,

you are strongly encouraged to familiarize yourself with your responsibilities, review the tutorial on Academic Integrity, and discuss any question you may have with the instructor.

All your submissions for this course must be the product of your own independent work. When writing an exam, a report, an assignment or a quiz, please remember that copying text, data, or figures is plagiarism, even if you received the material from a friend, if you found the material on the Internet (including learning apps and answer-sharing platforms), or if you are reusing material for which you have previously received credit. Letting other students use your work, completing work for other students, engaging in contract cheating or making answers available to others (including answers written by you and answer keys or materials provided by course staff or other sources) are also not allowed. Therefore, please keep your submissions, drafts and data in a secure location.

## Resources

The Academic Misconduct Policy is detailed in the Undergraduate Calendar:  
<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-misconduct/>

A tutorial on Academic Integrity can be found at:  
<https://academicintegrity.uoguelph.ca>

## Turnitin

In this course, Turnitin will be used to detect possible plagiarism, unauthorized collaboration and copying as part of the ongoing efforts to maintain academic integrity at the University of Guelph.

All submissions will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Usage Policy posted on the Turnitin.com site.

## 7.7 Acceptable Use of Course Materials and Resources

The instructor reserves the right to all materials made available for this course and all interpretations presented, which may not be reproduced, retained, or transmitted to others without the written consent of the instructor. Audio or video recording of lectures and teleconference sessions are not allowed without the written consent of the presenter. All the course materials, including the materials available on the course webpage and on Course Reserve, and all the contents distributed or generated during classes, laboratories, tutorials and exams are only for the use of students enrolled in this course for the purposes associated with this course and may not be further disseminated or retained beyond the duration of this course. The use of course materials and resources must comply with applicable license agreements and with Canadian copyright law. The access and use of information technology resources must comply with the University of Guelph Acceptable Use

Policy and with applicable agreements. You are encouraged to discuss any question you may have with the instructor.

This course outline includes sections and standard statements adapted with permission from the course outline template of the School of Engineering and from the course outline checklist of the University of Guelph.

## **8 School of Engineering Statements**

### **8.1 Instructor's Role and Responsibility to Students**

The instructor's role is to develop and deliver course material in ways that facilitate learning for a variety of students. Selected lecture notes will be made available to students on Courselink but these are not intended to be stand-alone course notes. Some written lecture notes will be presented only in class. During lectures, the instructor will expand and explain the content of notes and provide example problems that supplement posted notes. Scheduled classes will be the principal venue to provide information and feedback for tests and labs.

### **8.2 Students' Learning Responsibilities**

Students are expected to take advantage of the learning opportunities provided during lectures and lab sessions. Students, especially those having difficulty with the course content, should also make use of other resources recommended by the instructor. Students who do (or may) fall behind due to illness, work, or extra-curricular activities are advised to keep the instructor informed. This will allow the instructor to recommend extra resources in a timely manner and/or provide consideration if appropriate.

### **8.3 Lab Safety**

Safety is critically important to the School and is the responsibility of all members of the School: faculty, staff and students. As a student in a lab course you are responsible for taking all reasonable safety precautions and following the lab safety rules specific to the lab you are working in. In addition, you are responsible for reporting all safety issues to the laboratory supervisor, GTA or faculty responsible.

## **9 University Statements**

### **9.1 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.

### **9.2 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

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Graduate Calendar - Grounds for Academic Consideration

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions

<https://www.uoguelph.ca/registrar/calendars/diploma/current/index.shtml>

### 9.3 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

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Graduate Calendar - Registration Changes

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-reg-regchg.shtml>

Associate Diploma Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml>

### 9.4 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 resubmit work at any time.

### 9.5 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  
<https://www.ridgetownc.com/services/accessibilityservices.cfm>

## 9.6 Academic Integrity

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 encourages academic integrity. 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.

Undergraduate Calendar - Academic Misconduct  
<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Graduate Calendar - Academic Misconduct  
<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

## 9.7 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.

## 9.8 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>

## 9.9 Disclaimer

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings, changes in classroom protocols, and academic schedules. Any such changes will be announced via CourseLink and/or class email.

This includes on-campus scheduling during the semester, mid-terms and final examination schedules. All University-wide decisions will be posted on the COVID-19 website (<https://news.uoguelph.ca/2019-novel-coronavirus-information/>) and circulated by email.

## 9.10 Illness

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g.. final exam or major assignment).

## 9.11 Covid-19 Safety Protocols

For information on current safety protocols, follow these links:

- <https://news.uoguelph.ca/return-to-campus/how-u-of-g-is-preparing-for-your-safe-return/>
- <https://news.uoguelph.ca/return-to-campus/spaces/#ClassroomSpaces>

Please note, these guidelines may be updated as required in response to evolving University, Public Health or government directives.

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