



# ENGG\*3450 Electronic Devices

01

Fall 2021

Section(s): C01

School of Engineering

Credit Weight: 0.50

Version 1.00 - September 08, 2021

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## 1 Course Details

### 1.1 Calendar Description

This course explores the theory and principles of modern electronic devices and their applications in circuits. Course topics include: intrinsic and doped semiconductors; drift and diffusion currents; metal-semiconductor contacts and MOS capacitors; pn junctions and breakdown phenomena; solid-state diodes; bipolar and MOS field-effect transistors; current-voltage characteristics and biasing; small-signal models and operation; circuit integration; analysis and design of application circuits, operational transconductance amplifiers, and logic gates.

**Pre-Requisites:**

ENGG\*2450

**Restrictions:**

This is a Priority Access Course. Enrolment may be restricted to the BIOE, BME, CENG and ESC specializations in the BENG and BENG:C programs. See department for more information.

### 1.2 Timetable

**Lectures**

Monday 10:30–11:20 AD-S

Wednesday 10:30–11:20 AD-S

Friday 10:30–11:20 AD-S

**Tutorial/laboratory sessions**

**Section 0101** Wednesday 11:30–13:20 [RICH](#) 1504

**Section 0102** Friday 08:30–10:20 [RICH](#) 1504

**Section 0103** Monday 15:30–17:20 [RICH](#) 1504

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

### 1.3 Final Exam

Thursday, 9 December 2021, 11:30–13:30. Please verify the time and modality on the course webpage.

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## 2 Instructional Support

### 2.1 Instructional Support Team

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

**Lab Technician:** Hong Ma  
**Email:** hongma@uoguelph.ca  
**Telephone:** 519-824-4120 ext. 53873  
**Office:** RICH 1506

### 2.2 Teaching Assistants

**Teaching Assistant (GTA):** Sammar Haggag  
**Email:** shaggag@uoguelph.ca

**Teaching Assistant (GTA):** Ali Kholgh Khiz  
**Email:** akholghk@uoguelph.ca

**Teaching Assistant (GTA):** Swathi Makadia  
**Email:** smakadia@uoguelph.ca

**Teaching Assistant (GTA):** Rushi Vipulkumar Shah  
**Email:** rushivip@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.

#### Course textbook (Textbook)

A. S. Sedra, K. C. Smith, T. C. Carusone and V. Gaudet, [Microelectronic Circuits](#), Oxford, 8th ed., 2020, [TK7867 .S39 2020](#)

## 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 notes (Notes)

Lecture notes will be posted on the course webpage. The notes are prepared with the intention that you will fill in the blanks, take additional notes and write down examples in class. Attendance at lectures is expected, because material and interpretations not present in the notes will be discussed.

### 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.

### Datasheets and instruction manuals (Other)

Datasheets of electronic components and instruction manuals will be available on the course webpage to be consulted in relation to the laboratory activity.

## 3.3 Additional Resources

### Recommended books for consultation (Textbook)

S. Dimitrijevic, *Principles of Semiconductor Devices*, Oxford, 2nd ed., 2011, [TK7871.85 .D54697](#)

D. A. Neamen, *Microelectronics: Circuit Analysis and Design*, McGraw-Hill, 4th ed., 2010, [TK7867 .N412](#)

### 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.

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## 4 Learning Outcomes

This course is designed to help you with:

1. Gaining knowledge about the properties of semiconductor materials and the principles of operation of electronic devices.
2. Understanding the connections between device-level characteristics and circuit-level performance as the means to analyzing electronic circuits and designing applications that operate as desired.
3. Developing knowledge-integration, problem-solving and investigation skills as you prepare for your career in engineering.

### 4.1 Course Learning Outcomes

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

1. Relate the properties of semiconductor materials to the models of diodes and transistors, and describe the principles of operation of these devices.
2. Bias a circuit for linear operation, and solve circuit problems by applying device models and by executing mathematical operations based on the large-signal and small-signal abstractions.
3. Understand that you can use ideal models to predict experiments with physical devices, and identify in which aspects the behaviour of a real device deviates from its model.
4. Apply systematic analysis methods to evaluate the performance of circuits with diodes, transistors, gain stages and logic gates, identify the device parameters that determine performance of gain stages and logic gates, and deduce functions from combination of elements.
5. Comprehend the process of assembling and troubleshooting circuits on a breadboard, and the function of engineering tools for characterizing electronic devices.
6. Read and draw schematic diagrams, interpret data sheets of electronic devices, and communicate about performance of electronic components.

### 4.2 Engineers Canada - Graduate Attributes (2018)

Successfully completing this course will contribute to the following:

#	Outcome	Learning Outcome
1	Knowledge Base	1
1.2	Recall, describe and apply fundamental principles and concepts in natural	1

#	Outcome	Learning Outcome
	science	
1.3	Recall, describe and apply fundamental engineering principles and concepts	1
2	Problem Analysis	2
2.3	Construct a conceptual framework and select an appropriate solution approach	2
2.4	Execute an engineering solution	2
3	Investigation	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
4	Design	4
4.2	Construct design-specific problem statements including the definition of criteria and constraints	4
4.4	Evaluate alternative design solutions based on problem definition	4
5	Use of Engineering Tools	5
5.2	Demonstrate proficiency in the application of selected engineering tools	5
5.3	Recognize limitations of selected engineering tools	5
7	Communication Skills	6
7.2	Interpret technical documentation such as device specification sheets, drawings, diagrams, flowcharts, and pseudocode	6
7.3	Construct the finished elements using accepted norms in English, graphical standards, and engineering conventions, as appropriate for the message and audience	6

## 5 Teaching and Learning Activities

### 5.1 Lectures

Week	Dates	Lecture topics	References	Outcomes
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1	Sep. 6–10	Introduction	—	—
2	Sep. 13–17	Semiconductors and pn junctions	ch. 3	1
3	Sep. 20–24	Diodes	ch. 4	1, 2
4	Sep. 27–Oct. 1	Diode circuits	ch. 4	2, 3, 4
5	Oct. 4–8	Transistors	ch. 5	1, 2
6	Oct. 11–15	Study break	—	—
7	Oct. 18–22	Transistor circuits in dc	ch. 5	2, 3, 4
8	Oct. 25–29	Midterm	—	—
9	Nov. 1–5	Signals and amplifiers	ch. 1	3, 4
10	Nov. 8–12	Transistor amplifiers	ch. 7	4, 5, 6
11	Nov. 15–19	Inverters	ch. 16	4, 5, 6
12	Nov. 22–26	Logic gates	ch. 16	4, 5, 6
13	Nov. 29–Dec. 3	Review	—	—

Topics schedule will be adjusted throughout the course as needed.

## 5.2 Tutorials/Laboratories

Week	Dates	Topics	Due date	Outcomes
1	Sep. 6–10	—	—	—
2–3	Sep. 13–17, Sep. 20–24	Laboratory 1 with report	Oct. 1	3, 5, 6
4–5	Sep. 27–Oct. 1, Oct. 4–8	Tutorials 1 and 2 with assignment	Oct. 15	2, 4
6	Oct. 11–15	Study break	—	—
7	Oct. 18–22	Tutorial 3 (review)	—	—
8–9	Oct. 25–29, Nov. 1–5	Laboratory 2 with report	Nov. 12	3, 5, 6
10–11	Nov. 8–12, Nov. 15–19	Tutorials 4 and 5 with assignment	Nov. 26	2, 4
12	Nov. 22–26	Tutorial 6 (review)	—	—
13	Nov. 29–Dec. 3	—	—	—

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

In order for your marks to be recorded correctly, your Crowdmark, Teams, and Zoom 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 that cannot be attributed conclusively will not be recorded.

### 6.1 Marking Schemes & Distributions

Name	Scheme A (%)
Laboratories	20
Assignments	20
Midterm exam	20
Final exam	40
Total	100

### 6.2 Assessment Details

#### Laboratories (20%)

**Learning Outcome:** 3, 5, 6

Your proficiency with engineering tools will be assessed with two laboratory reports equally weighted. Please see section 5.2 and the course webpage for schedule and due dates.

#### Assignments (20%)

**Learning Outcome:** 2, 4

Your ability to apply course concepts will be assessed by solving two sets of 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:** Mon, Oct 25, 10:30 AM - 11:20 AM

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

It is a closed-book exam, and it includes all the material covered in lectures, tutorials and laboratories to-date. Please verify time and modality on the course webpage.

**Final exam (40%)**

**Date:** Thu, Dec 9, 11:30 AM - 1:30 PM

**Learning Outcome:** 1, 2, 3, 4, 5, 6

It is a closed-book exam, and it includes all the material covered in lectures, tutorials and laboratories to-date. Please verify the time and modality on the course webpage.

## 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 exams:**

Any student not taking an exam receives a grade of zero for that exam. There are no makeup midterm exams. In case you have a legitimate reason for missing the midterm exam, the weight may be shifted to the final exam upon presentation of a suitable request before the time of the midterm exam.

**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 suitable request before the time of the session.

**Late laboratory reports, assignments and exam papers:**

Any student not handing in a submission receives a grade of zero for that submission. There are no makeup submissions. In case you have a legitimate reason for missing a deadline, the instructor may consider an accommodation upon presentation of a suitable request 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 will not be accepted for marking. Non-complying submissions include late submissions, incomplete submissions and submissions sent via email or other non-compliant ways. 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\*3450" and add the topic of your message.
- Include a clearly written message and your name and student number.
- 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\*2450, Electric Circuits:**

Lumped-element models, node and mesh analysis, linearity and superposition, Thévenin and Norton theorems, operational amplifier, transformers, RLC circuits in dc, ac, and transient conditions.

## Follow-on courses

### **ENGG\*3490, Introduction to Mechatronic Systems Design:**

Modelling and design of mechatronic systems with electronic and mechanical components.

### **ENGG\*4080, Micro and Nano-Scale Electronics:**

Circuit integration and operating principles of integrated micro and nano electronic circuits.

### **ENGG\*4390, Bio-Instrumentation Design:**

Electronic instrumentation and measurements for biological systems.

### **ENGG\*4550, VLSI Digital Design:**

CMOS gates, latches, registers, pipelining, adders, multipliers, and shifters.

## 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, tutorial 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 teaching assistants and laboratory technician during the tutorial and laboratory time slots. Please contact the instructional support team if you need help or you have fallen behind in your work. They are willing to put in as much effort to help you as you are willing to put in to help yourself. They are happy to work with you on difficult concepts and to hear your suggestions for improving the course.

If you are ill, please call the Health Services or a physician. If you have emotional, family, or living environment problems that affect your ability to study, please visit the Counselling Services or a counsellor. If you have a disability, please refer to the Accessibility Services. If

you have other well-being concerns, please contact the Student Wellness Centre. You are encouraged to use the available services, and you are welcome to discuss with the instructional support team your specific learning needs in this course at the earliest possible time. It is your responsibility to seek help, inform the instructor and consult the program counsellor when extenuating circumstances affect your academic performance.

## 7.5 Recommendations About Laboratory Policies

You have to follow the posted laboratory 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 any food or drinks in the laboratory.

Before the first laboratory session, you must read the materials posted on the course webpage. During the first laboratory session, 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 safety procedures, you must consult with the laboratory technician. 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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