



# MICR\*2420 Introduction to Microbiology

Winter 2023

Section(s): C01

Department of Molecular and Cellular Biology

Credit Weight: 0.50

Version 1.00 - January 10, 2023

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## 1 Course Details

### 1.1 Calendar Description

This course will introduce students to the diversity of microorganisms, including, bacteria, viruses, and fungi, and the impact of microbes on everyday life. The interactions of microorganisms with the biotic and abiotic worlds will be discussed. Topics will include the roles of microorganisms in host-pathogen interactions in disease, the beneficial aspects of microorganisms in bioremediation and food production, and their application in biotechnology.

**Pre-Requisites:**

4.00 credits including (1 of BIOL\*1070, BIOL\*1080, BIOL\*1090, CHEM\*1040)

**Restrictions:**

This is a Priority Access Course. Enrolment may be restricted to particular programs, specializations or semester levels during certain periods. Please see the departmental website for more information.

### 1.2 Course Description

This course is designed to give students an appreciation of the diversity and importance of the microbes: organisms that are found everywhere, are integral to the function of the biosphere, impact our lives in positive and negative ways, have industrial and biomedical applications, and yet remain largely undiscovered. The course is also an introduction to other courses in microbiology and immunology, and for non-MCB students, may trigger an interest in delving further into these 2 areas. Classes will introduce current topics, and news, and will be interactive, posing questions for group and class discussion, to encourage a deeper understanding of the concepts.

### 1.3 Timetable

1. Lectures: in person, Tues. & Thurs., 5:30 - 6:50 PM, ROZ103
2. Labs: Mon. & Tues., 2:30 - 5:20 PM in SSC4102

- Please see WebAdvisor for your scheduled lab time. Labs are in 2 rotations of 5 labs each, with sections 0101 and 0103 in the first rotation and sections 0102 and 0104 in the second.

## 1.4 Final Exam

In person April 20, 2023, 8:30-10:30 am, location TBA.

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# 2 Instructional Support

## 2.1 Instructional Support Team

<b>Instructor:</b>	Wendy Keenleyside
<b>Email:</b>	wkeenley@uoguelph.ca
<b>Telephone:</b>	+1-519-824-4120 x53813
<b>Office:</b>	SSC 3506
<b>Lab Co-ordinator:</b>	Catrien Bouwman
<b>Email:</b>	cbouwman@uoguelph.ca
<b>Office:</b>	SSC 3504

## 2.2 Teaching assistants

Two graduate students from MCB will be assigned as GTAs to each of the 2 lab sections. These TAs will introduce themselves and provide contact details during the week 1 lab period.

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# 3 Learning Resources

## 3.1 Required Resources

### Introduction to Microbiology W23 (Lab Manual)

Lab manual provided electronically every week on CourseLink

### CourseLink (Website)

<https://courselink.uoguelph.ca>

The course website will be used extensively and will include all relevant course materials, including lecture slides, some online lab and case study materials, discussion boards, links for additional readings, assigned groups for case study & group component of the final

exam, drop boxes, and course calendar.

## 3.2 Recommended Resources

### Microbiology: Canadian Edition (Textbook)

<https://ecampusontario.pressbooks.pub/microbio/>

By Keenleyside *et al.* **Adapted from Microbiology by Openstax, specifically for MICR2420 and MICR2430.**

**This is an Open Education Resource (OER): the e-book is free.**

### Microbiology- An Evolving Science (5th edition) (Textbook)

<https://wwnorton.com/books/9780393419962>

**For students majoring or minoring in microbiology, the following textbook may be used as a resource, and will be required in MICR\*3240 (Microbial Physiology and Genetics) and MICR\*3280 (Microbial Cell Biology):**

by Joan L Slonczewski (Author, Kenyon College), John W Foster (Author, University of South Alabama), Erik R Zinser

Online subscriptions and hard copies are available through the Campus Bookstore. The book is also available from the library's reserve desk

### Classroom response system (Other)

<https://www.mentimeter.com>

Participation marks will be earned through regular classroom polling. The response system (Mentimeter) is free to students but requires registration. Each class will include a code to access that day's polls.

### PeerWise (Website)

<https://peerwise.cs.auckland.ac.nz>

For bonus marks.

This is a free online tool for authoring, answering, commenting on and rating student-authored multiple-choice questions. A site for MICR\*2420 W23 will be set up shortly and the class list imported. You will need to create an account (assuming you have not used the tool before) and then select the course. The tool is simple to use but instructions for creating, and for answering, questions, are provided in text as well as video on the PeerWise site. You can provide explanations for the various answers to your questions, or ask for explanations/provide feedback for other student's questions,

To encourage you to think more critically about the material, any good quality, higher Bloom's level questions that you write, will be considered for inclusion in the midterm and final exam! So you will derive double benefits from authoring and answering/providing feedback on, other questions: you will be learning as you do both, and you raise the likelihood that you will know some questions AND THEIR ANSWERS on these exams!

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## 4 Learning Outcomes

### Course Goals

This course serves as the foundation of the Microbiology program. It is designed to capture your interest by introducing you to the relevance of Microbiology in everyday life, discussing the global impact of microbes, and by providing an opportunity for hands-on experience with microbes in a laboratory setting. The course learning outcomes and the specific conceptual details associated with those outcomes (in bullet point) are listed below. Specific LOs and concepts will be identified at the beginning of each lecture and collectively will be assessed through the various graded components of the course. The list may be updated periodically during the semester, through deletion or addition, depending upon the pace and depth of coverage of a given topic. Course readings, class discussions and group work will also further develop the broader MCB Program Learning Outcomes (MCB Learning Outcomes) and the University of Guelph learning outcomes (UofG Learning Outcomes).

### 4.1 Course Learning Outcomes

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

1. By the end of the course, successful students will

Appreciate the roles of cells as the fundamental unit of life and the essential roles of the microbes in the biosphere, biotechnology, the food industry and health and disease

2. Demonstrate an understanding of how cells, organelles and all major metabolic pathways evolved from early prokaryotic cells, the differences between the cellular microbes and the viruses and how the evolutionary history and relatedness of cellular life is depicted in the Universal tree of Life
3. Demonstrate an understanding that the properties and metabolic diversity among eukaryotes, prokaryotes and viruses are a function of the chemical structures of their constituent macromolecules and how their evolutionary history relates to the greater metabolic diversity of the prokaryotes compared to the eukaryotes

4. Demonstrate an understanding of the interactions of microbes with their environment, and specifically the macromolecular interactions that underlie cellular motility, biofilm formation, quorum sensing, antimicrobial therapy, immune recognition and response, and pathogenesis
  5. Demonstrate an understanding that mutations, recombination and horizontal gene transfer have selected for a huge diversity of microorganisms and the various factors that affect the frequency of genotypes and phenotypes in a population over time
  6. demonstrate an understanding of the scientific method, by describing or assessing the appropriate method of visualization and identification of example microbes, performing experiments using appropriate safety precautions, and microbiological techniques for the isolation, identification and enumeration of representative groups of bacteria, archaea and fungi, using appropriate and accurate mathematical calculations for microbial enumeration and successfully interpreting and communicating scientific data
  7. Work and communicate cooperatively and effectively with others. Through open and regular communication between lab partners, and team members, students will further develop their team skills
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## 5 Teaching and Learning Activities

Classes are in person and designed for active learning, with regular student and class discussions. Polling will be used routinely - to solicit opinions and provide formative feedback. Where problem areas are identified, a concept will be reviewed. Because of the interactive nature of the classes, the lecture schedule may be subject to minor change.

- All lectures will be recorded, and the video made available the next day for streaming through Microsoft Stream.

### 5.1 Lecture

**Topics:**

The approximate textbook sections are given as a reference to enhance your understanding of the lecture content. No readings from the textbook will be assigned. All information required for the midterms and final exams is taken directly from lectures. ***For those who have not taken 1st year biology, textbook readings on background knowledge about cells and cell structures will be provided and will be important for your understanding of some of the course concepts.***

<b>Lecture</b>	<b>Topic</b>	<b>Keenleyside et al ref.</b>	<b>Slonczewski et al ref.</b>
1-3	Introduction	<b>Ch. 1</b>	<b>Ch. 1</b>
4-5	Microscopy	<b>Ch. 2</b>	<b>Ch. 2</b>
6-8	Characteristics of the bacteria & archaea	Ch. 3 & 4	Ch. 3
9	Eukaryotic microbes	Ch. 5	
10-11	Viruses	Ch. 6	Ch. 6 & 11
11	Case study quiz #1 - in class Midterm review	Assigned reading	
12	<b>Midterm - in class</b>		
13	Introduction to microbial ecology	Ch. 4 & 10	Ch. 5 & 21
14	Microbial	Sec. 4.1, 4.2,	Ch. 4, 10, 21,

<b>Lecture</b>	<b>Topic</b>	<b>Keenleyside et al ref.</b>	<b>Slonczewski et al ref.</b>
1-3	Introduction	<b>Ch. 1</b>	<b>Ch. 1</b>
4-5	Microscopy	<b>Ch. 2</b>	<b>Ch. 2</b>
	associations: biofilms, quorum sensing, symbioses & the human microbiome	12.7 & 10.2	23
15-16	Microbes in health & disease: innate immunity	Ch. 18, 19	Ch. 23 & 24
17-18	Microbes in health & disease: bacteria, virulence factors	Ch. 16, select sections from Ch. 23-27 (depending upon pathogen)	Ch. 25, 11 & 26
19-20	Case study quiz #2 - in class  Microbes in health & disease: viruses & fungi	CH. 6, Sec. 5.2, 16.3, 16.4	Ch. 25, 11, 26
21-22	Infection control, antibiotic resistance & drug development	Ch. 15, Sec. 19.5	Ch. 26, 27, 28

<b>Lecture</b>	<b>Topic</b>	<b>Keenleyside et al ref.</b>	<b>Slonczewski et al ref.</b>
1-3	Introduction	<b>Ch. 1</b>	<b>Ch. 1</b>
4-5	Microscopy	<b>Ch. 2</b>	<b>Ch. 2</b>
22-23	One Health		
23-24	Microbes in biocontrol, food & beverage industries	Ch. 10	Ch. 5, 21, 16

## 5.2 Lab

**Topics:** Course Undergraduate Research Experience

There are 5 weeks of lab, beginning the week of Jan. 16th (sections 0101 and 0103), and week of Feb. 27th (sections 0102 and 0104). Bring your lab coat, notebook, writing utensils and permanent ink marker. The lab manual and other lab resources are posted on CourseLink, along with a weekly Pre-Lab quiz (worth 1% each). A laptop (or tablet) will be required for Lab 5. Labs will focus on completing a short research project and will include techniques such as streak plating, bacterial enumeration, microscopy, Gram staining, PCR, and sequence analysis. There are three Lab Reports to be completed and submitted to Dropbox, which uses Turnitin plagiarism software. Due dates for Lab Reports are posted on CourseLink. You can work with your Lab partner to perform experiments and share ideas, but quizzes, assignments and lab reports need to be written in your own words. Do not copy and paste from any source, including other student reports. If in doubt, follow the plagiarism infographic in CourseLink and/or ask your instructor.

Labs may be subject to change in extenuating circumstances.

## 5.3 Method of Presentation

This course is designed to capture students' attention and interest; as such classroom



teaching will be interactive wherever possible, with an emphasis on microbiology as it pertains to everyday life, current affairs and news items. The lab component consists of 3-hour labs and will provide hands-on experience and demonstrations. Classes will include Powerpoint slides, and to facilitate more active learning, classroom polling questions (using Mentimeter: a free cloud-based "clicker" system). Students will also be assigned to groups to work on 2 short case studies outside of class: once before the midterm and once towards the end of the semester, These case studies will integrate various course concepts, focus on real-world concepts, and comprehension for each will be assessed through a short (10 MCQs) group quiz during class, using IF-AT cards (<http://www.if-at.com/home/about/default.aspx>). The midterm and final will also have a collaborative component.

### ACADEMIC INTEGRITY

The University of Guelph is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards and must abide by the applicable policies (see Section VIII of the Undergraduate Calendar on "Academic Misconduct").

Instructors may use automated tools: such as **TurnItIn** to detect possible cases of plagiarism in dropbox submissions.

## 6 Assessments

### 6.1 Marking Schemes & Distributions

There is no alternative midterm: students who miss the midterm, or those who perform better on the final exam, will have their midterm grade weight automatically transferred to the final.

Name	Scheme A (%)	Scheme B (%)
Midterm	25	0
Lab	25	25
Polling	5	5
Case study quizzes	5	5
PeerWise	0	0
Final exam	40	65
Total	100	100

## 6.2 Assessment Details

### Midterm (25%)

**Date:** Thu, Feb 16, 5:30 PM - 6:50 PM, In class, 2-stage\*

**Learning Outcome:** 1, 2, 3, 6, 7

In person, on all material covered in class to that point.

**\*2-stage format:** consists of individual, primarily higher-level MCQs, followed by a group test using IF-AT cards (<http://www.epsteineducation.com/home/>) and a subset of MCQs from the individual stage. The length of the first (individual) stage will be shortened to allow for the second stage. The midterm groups will be the same as for the first case study and the midterm grade is calculated to give the highest possible grade, using either of the following:

- Only the individual portion of the exam
- Individual + group grade (85% + 15%)
- Individual plus the class average from the group stage (when a student is unable to participate in the second stage\*\*; 85% + 15%)

\*\* Students registered with SAS should identify themselves to Dr. Keenleyside, in order to discuss the possibility of beginning the individual midterm **early**, in order to then participate with their group in the second stage

- The midterm will not be handed back however there will be ample opportunity to view and discuss midterms.
- **There is no alternative midterm:** the grade weight moved to the final exam in the event of a missed midterm.

### Lab (25%)

**Date:** , SSC 4102

**Learning Outcome:** 1, 4, 6

5% - Pre-lab quizzes (5 quizzes worth 1% each)

5% - Lab report 1 (due 6 days after Lab 1)

6% - Lab report 2 (due 6 days after Lab 3)

9% - Lab report 3 (due one week after Lab 5)

### Polling (5%)

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

**Polling grades:** students will earn one mark per response with the final grade based on the percentage of questions answered versus 95% of the total questions polled. Because a 95% response rate gives a 100% participation grade, only those students who require academic accommodation for MORE THAN 1 CLASS need to contact the instructor

$$\text{Grade} = \# \text{ student polls} / (\# \text{total polls} \times 0.95).$$

Mentimeter polling platform does not require a purchase, but does require enrolment.

### Case study quizzes (5%)

**Date:** Two: Tues. Feb. 14 & Tues. Mar. 21, in person, at the beginning of class

**Learning Outcome:** 1, 2, 4, 5, 6, 7

Case studies are done in pre-assigned groups of 4-5 and involve textbook or assigned reading, online discussion and/or meetings outside of class time. Comprehension for each will be tested through a short group quiz (10 MCQs) using IF-AT cards (<http://www.if-at.com/home/about/default.aspx>).

- Each quiz is worth 2.5%
- Teams for the first case study will be created randomly through Courselink. For the second case study, lab partners will be kept together if possible.

### Final Exam (40%)

**Date:** Thu, Apr 20, 8:30 AM, In Person, 2-stage\*

**Learning Outcome:** 1, 2, 3, 4, 5, 6, 7

- Cumulative, includes lecture content from the entire semester, plus the case studies, primarily higher-level multiple choice, including any higher-level questions from PeerWise, as well as a take-home portion assigned in advance of the exam period
- **2-stage exam\***: the length of the first (individual) stage will be shortened to allow for a second group stage. During the second stage, groups from 2nd case study will work together to reach consensus on a subset of MCQs from the individual stage. Overall exam grade is calculated to give the highest possible grade, using either of the following:
  1. Only the individual portion of the exam
  2. Both stages of the exam combined (85% + 15%)
  3. Individual plus the class average from the second stage (when a student is unable to participate in the second stage\*\*); 85% + 15%)

\*\* Students registered with SAS should identify themselves to Dr. Keenleyside, in order to discuss their options.

### Peerwise (0%)

**Date:** Online

Will be added onto the polling grade, which will be allowed to exceed 100%. Students earn 0.5 marks for each authored question and 0.25 marks per question answered, to a maximum of 10 marks (equivalent to 10 polls). In addition, any higher-level MCQs will be incorporated into the final exam!

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## 7 Course Statements

### 7.1 Instructor Policies

#### Grading

1. **Lab reports** - submitted via Dropbox before the due dates indicated in CourseLink (as pdf or docx files - you are responsible for ensuring files are formatted correctly). For ALL reports, deductions for late submissions will be 10% per day (the weekend will cost a 20% grade reduction), up to a 30% deduction. After 3 days, the submission will not be accepted. Each student has **one "free pass" for a 48h due date extension**, no questions asked. **These are to be used for health-related problems that prevent you from submitting by the due date.** It is a STUDENT RESPONSIBILITY to e-mail Dr. K. (cc the lab coordinator & TA) within that 48h window to claim their free pass.
2. **Pre-Lab quizzes:** to be completed online prior to each lab as per posted dates & instructions. Please contact Catrien if you have valid grounds for being unable to complete one or more of these. See below for information on academic consideration.
3. **Bonus activities** - students may supplement classroom polling through authoring, and/or answering, questions on PEERwise (maximum of 10 marks - equivalent to 10 polls). Polling grade will be allowed to exceed 100%

#### E-mails

1. Please only use your UofG e-mail account, identify the course about which you are e-mailing, and sign with your chosen name at the end.
2. All questions related to Course/Lab Content should first be posted to the Discussion board on CourseLink. Dr. K. and Catrien will regularly check and respond to those posts,

allowing the rest of the class to see the answers.

3. Use email for personal issues and for meeting appointments. These e-mails will be prioritized - we're here to help and support you!
4. If you feel you need help with your learning/study skills, please e-mail Dr. K!
5. Please be patient - replies to e-mails may take 24-48h. Those sent outside of regular weekday hours (8:30 am-4:30 pm Eastern Time) will be answered during the regular work hours.
6. Just as we promise to respond to your e-mails (within the above guidelines), we expect you to answer any e-mail we send to you. These are rare, but always important, and usually time-critical.
7. E-mail inquiries for which the answer is easily available by checking the lab exercises, course outline, or CourseLink site may not be answered. Please use relevant discussion boards: if we don't answer right away, your peers may respond with the answer!

### **Student responsibilities**

1. **Respectfulness:** students are expected to treat classmates, the instructor and teaching staff with respect at all times.
2. **Labs:** attendance and completion of laboratory components is mandatory. If you cannot complete the online quizzes or Lab Report by the posted date please e-mail Catrien asap (and before the due date) about making other arrangements.
3. **Laboratory preparedness:** you must have read the relevant assigned laboratory exercise in advance of the lab, and completed the associated online pre-lab quiz.
4. **Working in pairs and teams:** Lab partners and case study teams are expected to work collaboratively and to communicate effectively with each other and the GTAs/lab coordinator. Lab partners are expected to hand in independent lab reports. Turnitin plagiarism software is used to evaluate submitted reports.

## **8 Department of Molecular and Cellular Biology Statements**

### **8.1 Academic Advisors**

If you are concerned about any aspect of your academic program:

- Make an appointment with a program counsellor in your degree program. [B.Sc. Academic Advising](#) or [Program Counsellors](#)

## 8.2 Academic Support

If you are struggling to succeed academically:

- Learning Commons: There are numerous academic resources offered by the Learning Commons including, Supported Learning Groups for a variety of courses, workshops related to time management, taking multiple choice exams, and general study skills. You can also set up individualized appointments with a learning specialist.  
<http://www.learningcommons.uoguelph.ca/>
- Science Commons: Located in the library, the Science Commons provides support for physics, mathematic/statistics, and chemistry. Details on their hours of operations can be found at: <http://www.lib.uoguelph.ca/get-assistance/studying/chemistry-physics-help> and <http://www.lib.uoguelph.ca/get-assistance/studying/math-stats-help>

## 8.3 Wellness

If you are struggling with personal or health issues:

- Counselling services offers individualized appointments to help students work through personal struggles that may be impacting their academic performance.  
<https://www.uoguelph.ca/counselling/>
- Student Health Services is located on campus and is available to provide medical attention. <https://www.uoguelph.ca/studenthealthservices/clinic>
- For support related to stress and anxiety, besides Health Services and Counselling Services, Kathy Somers runs training workshops and one-on-one sessions related to stress management and high performance situations.  
<http://www.selfregulationskills.ca/>

## 8.4 Personal information

Personal information is collected under the authority of the University of Guelph Act (1964), and in accordance with Ontario's Freedom of Information and Protection of Privacy Act (FIPPA) <http://www.e-laws.gov.on.ca/index.html>. This information is used by University officials in order to carry out their authorized academic and administrative responsibilities and also to establish a relationship for alumni and development purposes.

For more information regarding the Collection, Use and Disclosure of Personal Information policies please see the Undergraduate Calendar.  
(<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/intro/index.shtml>)

## 8.5 Course Offering Information Disclaimer

Please note that course delivery format (face-to-face vs online) is subject to change up to the first-class day depending on requirements placed on the University and its employees by public health bodies, and local, provincial and federal governments. Any changes to course format prior to the first class will be posted on WebAdvisor/Student Planning as they become available.

## 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 make a booking at least 14 days in advance, and no later than November 1 (fall), March 1 (winter) or July 1 (summer). Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time.

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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