

MBG*3060 - Quantitative Genetics

Winter 2025 Course Outline

Section: 01

Credits: 0.50

Land Acknowledgement

The University of Guelph resides on the ancestral lands of the Attawandaron people and the treaty lands and territory of the Mississaugas of the Credit. We recognize the significance of the Dish with One Spoon Covenant to this land and offer respect to our Anishinaabe, Haudenosaunee and Métis neighbours. Today, this gathering place is home to many First Nations, Inuit, and Métis peoples and acknowledging them reminds us of our important connection to this land where we work and learn.

In addition to the standard statement by the University above, the instructor also wishes to make the following acknowledgment. I would like to acknowledge that I live, work and play on land that is part of the traditional lands of the Mississauga, Mississaugas of the Credit First Nation, Attiwonderonk (Neutral), Anishinabewaki, Wendake-Nionwentsio and Haudenosaunee peoples within the Treaty 3 and Treaty 20 territories. Like many of my pre-Internet generation I grew up largely unaware of First Nations issues and history, my understanding was limited by what little we were taught in school or through media coverage. But ignorance is not bliss and as awareness and information increases, I strive to learn more and gain a better understanding about the history, traditions and issues of these peoples and the land we share and I work to care for that land for current and future generations.

Calendar Description

This course examines the nature of Mendelian inheritance when extended to quantitative traits that are jointly influenced by the environment and the simultaneous segregation of many genes. Prediction of response to natural and artificial selection in populations will also be studied.

Department(s): Department of Animal Biosciences

Course Description

Quantitative Genetics is not a new subject by any means. With the rediscovery of Mendel's work in the early 1900's, geneticists started to try to figure out why they observed similarities and differences in populations of plants and animals, both in simple characteristics like coat colour, seed colour etc and complex characteristics like size, growth, drought tolerance, temperament, speed and strength. Since no tools existed to study this, they invented them and many early quantitative geneticists were also very good statisticians. Along the way, as quantitative geneticists figured out alleles, genetic variation and selection response, new fields of genetics were spawned - population genetics, evolutionary genetics, conservation genetics, animal breeding, plant breeding and so on. But Quantitative Genetics is the grandparent of them all.

So why the heck are we devoting a whole course to dusty theory that is over 100 years old? Because it isn't dusty! Early quantitative geneticists figured out a lot of stuff without the benefit of all of the molecular genetics tools and techniques we have now. And it turns out they got it right! Well at least mostly right and, like classic rock, the best bits remain and the "B sides" have been forgotten (along with the meaning of "B side"!). So now that the molecular geneticists are catching up to us, we have an extensive toolkit of methods to figure out what the molecular labs are puzzling over. So welcome to the new old subject of Quantitative Genetics.

Course Fit Within Program/Curriculum

MBG-3060 is the middle link in a chain of courses in livestock genetics. The pre-requisite course, MBG-2400 introduces quantitative genetics. This course, MBG-3060, increases students' knowledge in that field and is a prerequisite to two potential follow-up courses at the 4000-level - MBG-4020 Companion Animal Genetics and MBG-4030 Animal Breeding Methods. MBG-3060 theory is also applicable to plant breeding although plant geneticists often manage populations quite differently since they have options like selfing that don't work with livestock

Lecture Schedule

MonWedFri 3:30pm-4:20pm in ROZH*101 (1/6 to 4/21)

Instructor Information

Andrew Robinson

Email: andyr@uoguelph.ca

Additional Support

The teaching assistants for this course are Seyedebaran (Baran) Amini, Gabriella (Gabby) Condello, Krishani Sinhalage and Victoria (Tori) Storing. Their contact information can be found on the Courselink site for MBG-3060.

Learning Resources

There is no official textbook for this course. The primary source of reference material for the course is the lecture slides posted on CourseLink.

The presentation of the course material generally follows the notation and approach in the landmark textbook "Introduction to Quantitative Genetics" by Douglas Falconer originally published in 1962 and available still from Pearson Publishing with Trudy McKay as co-author on more recent editions (retail price is around \$40 on Amazon.ca). Falconer's book was itself based on over 50 years of various folks teaching quantitative genetics with strong ties to Prof. J.L. Lush and others at Iowa State University. Throughout the world, this is the *de facto* standard way of presenting this material and Falconer's book has been translated into many, many languages.

Recordings of lectures will be available through Zoom and linked in the MBG-3060 Courselink site usually a couple of days after the lecture. Additional recordings may also be available through MS Stream and linked on Courselink. The lecture videos include the slides presented as well as the on-screen annotations added during the presentation and the instructor's voice in the audio track. Sporadically, links to relevant information from the media or scientific literature to provide background on topics we discuss in class will be posted on CourseLink also.

Campus Resources

If you are concerned about any aspect of your academic program: Make an appointment with a Program Counsellor (<https://www.uoguelph.ca/uaic/programcounsellors/>) in your degree program. If you are struggling to succeed academically: There are numerous academic resources offered by the Learning Commons (<https://www.lib.uoguelph.ca/using-library/spaces/learning-commons/>) including, Supported Learning Groups for a variety of courses, workshops related to time management, taking multiple choice exams, and general study skills.

Cost of Textbooks and Learning Resources

The university now requires this section disclosing the cost of textbooks and other stuff required by the instructor be included in all course outlines as part of showing what your education costs. There's no textbook or other stuff required for MBG-3060, so - full disclosure - your additional instructor-driven costs for this course are zero. As mentioned, if there was a textbook required, it is available for a mere \$40 online. With a textbook, at the end of the semester you have a textbook to show for that expenditure and potentially sell on the used market or use in your future studies. By comparison, the University charges \$325 per semester for a yellow zone student commuter parking permit. For a parking permit, you have absolutely nothing to show for that expense at the end of the semester. Think about it.

Course Learning Outcomes

1. Analyze how allele frequency can fluctuate within a population over time, describe factors that affect these fluctuations and analyze how these factors affect genetic variation.
2. Estimate levels of genetic variation within a population and demonstrate how that variation may be exploited to make genetic change in populations over time.
3. Demonstrate how an individual locus can contribute to quantitative genetic variation involving many loci in the same individual or in many individuals in the population.
4. Demonstrate how genetic variation can be gained or lost through selection of mates, combining different populations and other mechanisms.
5. Demonstrate why the mating of close relatives leads to a loss of genetic variation and how to recover lost genetic variation.

Course Level Learning Outcomes

Overall Course Learning Outcome

Genetic variation is the engine that drives natural and artificial selection. Quantitative Genetics focuses on quantifying and measuring characteristics about animals called traits and variation in those traits. By the end of this course, you will be able to think like a quantitative geneticist and analyze and quantify genetic variation, showing how it can be influenced and manipulated, both by natural and artificial means.

Schedule of Topics and Assignments

Week of	Topic	Activities	Due
1/6	Introduction and Brief Review of Pre-requisite material	An optional non-credit review quiz is available	None
1/13	Linkage disequilibrium and migration	Quiz 1 - Allele frequency and linkage disequilibrium - opens	None
1/20	Single locus selection, mutation and population size	Quiz 1 closes, Quiz 2 - Migration, selection, mutation - opens	Quiz 1
1/27	Population size and inbreeding	Quiz 2 closes, Quiz 3 - Population size and inbreeding - opens	Quiz 2
2/3	Relationships (genetic) and inbreeding, heritability	Quiz 3 closes, Quiz 4 - Relationships and inbreeding - opens. Quiz 4 marks the end of material for the midterm.	Quiz 3
2/10	Heritability and response to selection	Quiz 4 closes, Midterm exam online Thursday and Friday	Quiz 4, Online Midterm Exam
2/17		Winter Break	
2/19		Winter Break	
2/21		Winter Break	
2/24	Calculating heritability from ANOVA	Quiz 5 - Heritability and selection - opens	None
3/3	Repeatability, correlated response and allele effects	Quiz 5 closes, Quiz 6 - Heritability via ANOVA - opens	Quiz 5
3/10	Allele effects and QTL detection	Quiz 6 closes, Quiz 7 - Correlated response and allele effects - opens	Quiz 6
3/17	QTL detection and genomic analyses	Quiz 7 closes, Quiz 8 - QTL Detection - opens, Selection Quiz opens, optional Bonus / Makeup Quiz opens	Quiz 7
3/24	Genomic analyses	Quiz 8 closes, Quiz 9 - Genomic Analyses - opens, Selection and Bonus / Makeup Quizzes continue	Quiz 8
3/31	Genomic analyses and wrap up	Quiz 9 closes, Selection and Bonus / Makeup Quizzes close	Quiz 9, Selection Quiz, Bonus / Makeup Quiz
4/14			Final Exam Friday April 11 11:30am-1:30pm
4/18		Holiday - No Exams Scheduled	

Assessment Breakdown

Description	Weighting (%)	Due Date
Weekly Courselink Quizzes	36%	Weekly - See Courselink
Selection Quiz	4%	Week 12 - See Courselink
Online Midterm Quiz	15%	Week 6 - See Courselink
Final Exam	45%	April 11 11:30am-1:30pm

Assessment Details

Quizzes

Weekly CourseLink Quizzes

36%

Course Learning Outcomes Assessed: 1, 2, 3, 4, 5

Selection Quiz

4%

Course Learning Outcomes Assessed: 1, 2, 3, 4, 5

Online Midterm Quiz

15%

Course Learning Outcomes Assessed: 1, 3, 4, 5

Exam

Final Exam

45%

Course Learning Outcomes Assessed: 1, 2, 3, 4, 5

Final Exam

Date: Apr 11

Time: Fri 11:30am-1:30pm

Location: TBA *Please see Web Advisor closer to the date of scheduled final for location.*

To understand rules and regulations regarding Examinations students are encouraged to read Student's Responsibilities (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/examinations/>)

If the student is unable to meet the final exam requirements due to medical, psychological or compassionate circumstances they are encouraged to review Student's Responsibilities in the Academic Consideration, Appeals and Petitions (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-consideration-appeals-petitions/>) section of the Academic Calendar.

Grading Details

Weekly CourseLink Quizzes (36%)

Learning outcomes assessed: 1,2,3,4,5

Weekly Quizzes - 9 weekly quizzes plus the optional Bonus / Makeup quiz for a total of 10 quizzes, 4 points each, lowest grade is dropped. Quizzes are generally due Monday night but check CourseLink for the deadlines for all of the quizzes, especially the Selection and Bonus / Makeup Quizzes.

Graded Quizzes

The quizzes are scheduled weekly (consult course activities for the overall schedule and CourseLink for the deadline dates). Each weekly quiz generally has 15 questions; the first 10 questions follow the practice quizzes (see below) and the final 5 questions explore concepts that integrate the topics covered in the quiz with previous topics and relate quantitative genetics theory to practical applications. There are 9 weekly quizzes throughout the semester (appropriately called Quiz 1 to Quiz 9) and a Bonus / Makeup Quiz at the end of the semester for a total of 10 quizzes and the best 9 quiz grades from these 10 quizzes will be used for your final grade. Please note that the Selection Quiz is not part of this "best 9" system.

Each weekly quiz (Quiz 1-9) is open for 8 days from Sunday morning to the following Monday at 11:59 p.m. and is due when the quiz module closes at 11:59 p.m. on the due date. There is no time limit, just a final quiz deadline. During these 8 days, you can re-open and re-enter the quiz as often as you like until you submit it. With this system, there is no opportunity for late quiz submission because the answers are automatically released when the quiz closes. If you are registered with SAS, since the quizzes are open for 8 days giving you about 180 hours to complete the quiz, your regular quiz and exam accommodations for extended time are not needed. Other accommodations may still apply, check with your SAS advisor and the course instructor.

The Selection Quiz and the Bonus / Makeup Quiz have a *2-week availability and different deadlines*.

As a safety net, you have 2 attempts for each quiz. You will know the grade on your first attempt but you won't know the answers if you choose to make a second attempt. The extra attempt is there should you wish to retry a quiz and CourseLink will keep the highest of the two grades.

Should it happen that you are unable to complete your quiz on time due to circumstances warranting academic consideration, *complete the academic consideration request form* found on the Courselink site and contact the instructor by e-mail (andyr@uoguelph.ca) to request academic consideration.

There is a form because students often forget to provide enough detail for the instructor to figure out what assessment(s) is/are affected so the form just helps ensure the information needed to consider requests is all there. If you have a bad week, the Bonus / Makeup Quiz is available at the end of the semester as a safety net to replace one quiz. There is no weekly quiz starting the week of the midterm quiz or due over Reading Week. The Selection Quiz is a special quiz covering the very important topic of selection and is designed to review all the types of selection we cover throughout the semester.

The Selection Quiz is mandatory and is not part of the "best 9" option described above and it doesn't have a practice quiz but since it covers all different aspects of selection you have already had practice questions on all the aspects covered.

Practice Quizzes

Each of the 9 weekly quizzes for credit has a matching practice quiz that is not for credit. You have unlimited attempts for the practice quizzes and where appropriate, the question feedback has been specially designed to assist you in understanding the material covered by each question. The practice quizzes remain open for the entire semester so you can use them to review for the midterm and final exams as well. Each practice quiz typically contains 10 questions and many of the quizzes have randomized elements to provide variety and new learning experiences with each attempt. The quizzes for credit may also draw from questions you might see on a practice quiz. Please note there are no practice quizzes for the Bonus / Makeup Quiz and the Selection Quiz since those quizzes review material covered throughout the semester so you have already been practicing for those quizzes.

Review Quiz

There is an additional practice quiz at the beginning of the semester that you can use to review the material from MBG-2400 since it could be at least a year since you have had any exposure to that material. This quiz is purely for your use to recall / review material that was covered in MBG-2400. You will encounter this material again in greater detail and more advanced levels in MBG-3060 so if it fits your study preferences, the review may help reawaken the brain cells that contain this material from MBG-2400.

Selection Quiz (4%)

Learning outcomes assessed: 1,2,3,4,5

This quiz is required and is separate from the weekly quizzes. The Selection Quiz cannot be dropped as part of the "best 9 quizzes" system described above.

Online Midterm Quiz (15%)

Learning outcomes assessed: 1,3,4,5

The online midterm quiz is available between 6:00am Thursday February 13 to 11:59pm on Friday February 14.

The midterm quiz is time-limited, once you open the midterm quiz, you have 2 hours in which to complete the 60 questions. The midterm quiz is more like a real midterm than the weekly quizzes so unlike the weekly quizzes, you have one attempt at the midterm quiz and the grade will not be released until after the availability period ends. You have a span of 2 days in which to choose to do the midterm, don't leave it to the last minute. If you are unable to complete the online midterm quiz and wish to request academic consideration, *complete the academic consideration request form for this course* (on the Courselink site) and contact the instructor as soon as possible. *If you are registered with SAS and are given accommodations for additional time on exams, your accommodations will automatically be set. If you do not see your SAS accommodations set when the midterm becomes available (a day or so before it opens), it probably means your accommodations have changed and are not in the system yet so email the instructor (andy@uoguelph.ca) with a CC to your SAS advisor.*

Final Exam (45%)

Learning outcomes assessed: 1,2,3,4,5

Friday Apr 11, 11:30am - 1:30pm, In-person, exam location TBA

The final exam is an in-person, closed-book exam in a room location on campus yet to be announced. A formula sheet will be provided with the exam and a calculator is allowed. By calculator, it is meant a device that can calculate but not communicate. So a calculator app in a smartphone or tablet or computer is NOT considered to be a calculator for this exam.

Last Day to Drop Course

The final day to drop Winter 2025 courses without academic penalty is the last day of classes: April 04

After this date, a mark will be recorded, whether course work is completed or not (a zero is assigned for missed tests/assignments). This mark will show on the student's transcript and will be calculated into their average.

Course Grading Policies

Submission of Assignments

Everything for this course except the Final Exam is submitted through a Courselink Quiz. Due dates are shown in Courselink.

Late Assignment

This course has a *no late* policy for the weekly quizzes since there are typically at least 8 days in which to complete the quizzes. For weekly quizzes, there is an optional Bonus / Makeup quiz at the end of the semester to potentially replace a missed quiz. The midterm and final exams are as scheduled.

Course Standard Statements

Course Policies

Course Technology Policy

Virtually all students are using their own technology such as smartphones, tablets and computers of various flavours in class and/or for the University of Guelph's online Learning Management System (aka CourseLink). Society has an increasing level of dependence upon personal technology. Unfortunately technology glitches are increasingly used as an excuse for not completing online course requirements and for missing course deadlines, sort of like the modern equivalent of "my dog ate my homework". However, with so much emphasis placed on online learning, excuses based on technology failure are not sustainable and won't be accepted. *It is your responsibility to ensure that you can access the course materials and complete online course requirements within the time allotted regardless of technological issues you may encounter.* This means you are expected to take reasonable and necessary steps to make your technology work or arrange to access or borrow technology or find an internet connection etc that does work in order to meet course deadlines.

If there is a widespread problem and CourseLink is not accessible for a significant period of time (not including scheduled maintenance) deemed by the instructor to have had an impact on students' abilities to complete quizzes, appropriate accommodations will be given.

If you are connected to virtual learning activities, you should use the technology to interact with the course in an appropriate manner that respects your fellow students by not creating undue distractions or interruptions. Also keep in mind that if your technology uses the University's network to access course material, the University's acceptable use policy for the campus network also comes into play.

Lecture Recording Policy

The instructor will record classes using a combination of tablet, laptop and Zoom. The recording captures the screen image as real-time video including annotations made during the presentation and the audio track captures the instructor's voice. These recordings will be available through the Zoom link on Courselink and accessed via a link on the Courselink site within a couple of days or so after class. These recordings will represent the officially sanctioned recorded media for the lecture and are provided for the convenience of students officially registered in the course and may not be reproduced, or transmitted to others, without the express written consent of the instructor. Note that there may be unforeseen circumstances resulting in incomplete or missing lecture recordings so it should be considered an additional aid and not necessarily a replacement for attending class, learning the material on your own and through the quizzes and additional media provided.

Group Work Policy

The weekly quizzes are designed as an experiential learning tool. You are encouraged to collaborate and work together on your quizzes to enhance your learning experience. However, *everyone must submit their own individual quiz for grading.* You will find with the randomized elements built in to the quizzes that each of you will be doing a slightly different quiz covering the same concepts. The midterm quiz is expected to be an individual effort. The online midterm quiz has a large, randomized bank of questions behind the scenes so each student will have a unique midterm quiz.

Academic Consideration Request Policy

In order to facilitate the process of requesting academic consideration and to ensure that you provide sufficient information in making your request, there is a form posted on CourseLink for that purpose. Requests for academic consideration must be done using this form.

Email Contact Policy

Email is used as an important source of updates about this course. All official email from the instructor will be sent to your University email account (ie the one with @uoguelph.ca). It is expected that you are checking this email account on a frequent basis. The instructor for the course has set up a course email to help ensure your email about the course doesn't get swallowed up in regular inbox traffic. In order to facilitate an answer to your email, please consider the following guidelines:

- Correspond with the instructor (**andyr@uoguelph.ca**) using your official University email (@uoguelph.ca). Emails from other addresses (i.e. @gmail.com or @hotmail.com) will be ignored as there is no guarantee who owns the account so the University's privacy policy prohibits instructors from replying to non-UofG email addresses
- If the answer to your email query can be found in this course outline or other material posted on the MBG-3060 CourseLink site or was covered in class and therefore captured in a lecture recording, since the information was already available you may not receive a reply or at best you may just get a terse reply with a link to the relevant information
- Include a few relevant key words indicating what your message is about
- Include your full name and student number in the email signature
- If you are requesting academic consideration, include a copy of the Academic Consideration Request form found on the MBG-3060 CourseLink site
- Allow 24 to 48 hours for a response to your query, especially if you send your message late at night or over the weekend (in other words sending an urgent email expecting a response in a few minutes is not likely to be successful, especially outside of normal human circadian rhythm times).

Netiquette Policy

Since we are all sharing the online learning environment in this course from a variety of locations and probably more casual circumstances, there can be a tendency to view the online environment as you might with social media and other more recreational uses. Please keep in mind that online activities for this course are expected to be professional interactions. The following statements about Online Behaviour are provided by the University. Inappropriate online behaviour will not be tolerated. Examples of inappropriate online behaviour include:

- Posting inflammatory messages about your instructor or fellow students
- Using obscene or offensive language online
- Copying or presenting someone else's work as your own
- Adapting information from the Internet without using proper citations or references
- Buying or selling term papers or assignments
- Posting or selling course materials to course notes websites
- Having someone else complete your quiz or completing a quiz for another student
- Stating false claims about lost quiz answers or other assignment submissions
- Threatening or harassing a student or instructor or TA online
- Discriminating against fellow students, instructors and/or TAs
- Using the course website to promote profit-driven products or services
- Attempting to compromise the security or functionality of the learning management system
- Sharing your user name and password
- Recording lectures without the permission of the instructor

Standard Statements for Undergraduate Courses

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 discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

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

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

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 10 days in advance, and no later than the first business day in November, March or July as appropriate for the semester. Similarly, new or changed accommodations for online quizzes, tests and

exams must be approved at least a week ahead of time. For students at the Guelph campus, information can be found on the SAS website. (<https://www.uoguelph.ca/sas/>)

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.

See the Academic calendar for information on regulations and procedures for Academic Accommodations of Religious Obligations (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-accommodation-religious-obligations/>).

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.

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 undergraduate students 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 the Undergraduate Calendar - Dropping Courses (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/dropping-courses/>).

Email Communication

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

Health and Wellbeing

The University of Guelph provides a wide range of health and wellbeing services at the Vaccarino Centre for Student Wellness (<https://wellness.uoguelph.ca/>). If you are concerned about your mental health and not sure where to start, connect with a Student Wellness Navigator (<https://wellness.uoguelph.ca/navigators/>) who can help develop a plan to manage and support your mental health or check out our mental wellbeing resources (<https://wellness.uoguelph.ca/shine-this-year/>). The Student Wellness team are here to help and welcome the opportunity to connect with you.

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).

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.

Resources

The Academic Calendars (<http://www.uoguelph.ca/registrar/calendars/?index>) are the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs.

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. 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/>)