



BIOL*3060 Populations, Communities and Ecosystems - DRAFT

Winter 2022

Section(s): C01

College of Biological Science

Credit Weight: 0.50

Version 1.00 - January 10, 2022

1 Course Details

1.1 Calendar Description

This course will explore advanced topics in ecology, building on the foundation provided by BIOL*2060. The course material will be organized around common mechanisms that link ecological processes across levels of organization, such as organism function, species interactions, spatial connectivity and energetic transfers across trophic levels. Emphasis will be on testing ecological theory with quantitative analysis of empirical data, thereby gaining greater depth of understanding of ecological processes at the population, community and ecosystem scales. Through the examination of case studies, students will apply ecological knowledge and quantitative analysis to problem solving in areas such as resource management, conservation of populations and communities, and predicting biosphere responses to climate change.

Pre-Requisites: 10.00 credits including BIOL*2060, (1 of GEOG*2460, STAT*2040, STAT*2060, STAT*2230)

1.2 Course Description

This course will be (at least in part) face-to-face during Winter 2022. Students are expected to be present on campus to participate in face-to-face tutorials.

1.3 Timetable

The timetable and location for this course is subject to change. Please see WebAdvisor and CourseLink for the latest information.

1.4 Final Exam

The timetable and location for exams is subject to change. Please see WebAdvisor and CourseLink for the latest information.

2 Instructional Support

2.1 Instructional Support Team

Instructor:	Andrew MacDougall
Email:	amacdo02@uoguelph.ca
Telephone:	(519) 824-4120 x56570
Office:	SSC 2459
Course Co-ordinator:	Timothy Bartley
Email:	tbartley@uoguelph.ca
Telephone:	(519) 824-4120 x53676
Office:	SSC 2505
Office Hours:	By appointment only. Requests should be made by email. All meetings will be virtual unless otherwise specified.

2.2 Teaching Assistants

Teaching Assistant (GTA):	Sarah Mueller
Email:	biol3060@uoguelph.ca
Teaching Assistant (GTA):	Reilly O'Connor
Email:	biol3060@uoguelph.ca
Teaching Assistant (GTA):	Charlotte Ward
Email:	biol3060@uoguelph.ca

3 Learning Resources

There is no required textbook for this course. However, you will need to fully understand the basic concepts taught in BIOL*2060 and introductory statistics taught in STAT*2040 (or equivalent courses). It is your responsibility to critically evaluate your understanding of the basic ecological concepts in each module and your statistics knowledge, and then brush up on these concepts as required. If you do not believe that you have mastered these concepts, we recommend that you revisit your notes from BIOL*2060/STAT*2040, read the appropriate sections of the textbook(s) from BIOL*2060/STAT*2040, and review any other alternative resources (other general ecology textbooks, introductory statistics textbooks) as needed.

Please note: details for required course resources may change.

3.1 Required Resources

Courselink (Website)

<https://courselink.uoguelph.ca>

BIOL*3060 will make use of the University of Guelph Courselink website. Please check the

CourseLink website regularly as this will be where we post the most current information and deadlines. It is your responsibility to read and fully understand the material/resources provided to you prior to lectures, tutorials and exams.

Zoom (Software)

This course may use Zoom. Students may be required to register for a free basic Zoom account using their University of Guelph email address.

SimBio (Software)

<https://simbio.com/>

Tutorial Assessments will be completed using SimBio.

4 Learning Outcomes

4.1 Course Learning Outcomes

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

1. Identify and evaluate the validity of ecological theories that explain the distribution and abundance of species and the functioning of communities and ecosystems.
 2. Identify the common mechanisms that influence population and community dynamics and ecosystem function.
 3. Evaluate how ecological processes at one level of organization influence processes at other levels of organization.
 4. Utilize quantitative methods to project the dynamics of populations, communities and ecosystems.
 5. Evaluate hypotheses about mechanisms responsible for the dynamics of populations, the assembly of communities and the functioning of ecosystems using inferential statistical analyses.
 6. Work collaboratively and apply ecological science to formulate solutions to specific conservation and management problems.
 7. Communicate the results of research findings to peers in written documents and oral presentations.
-

5 Teaching and Learning Activities

5.1 Course Content

This course will be divided into three sections, each with a variety of topics/case studies:

1. Populations
2. Communities
3. Ecosystems

Please note: details of the course content may change.

6 Assessments

6.1 Assessment Details

Tutorial Exercises (30%)

Date: Periodically
Require SimBio software.

Midterm Exam 1 (10%)

Date: Week 4
Details about the midterm exams are subject to change.

Midterm Exam 2 (25%)

Date: Week 8
Details about the midterm exams are subject to change.

Midterm Exam 3 (35%)

Date: Week 12
Details about the midterm exams are subject to change.

6.2 Important Dates

Deadlines will be posted on CourseLink and also will be discussed during lectures/tutorials. Be sure to attend lectures/tutorials regularly or you may miss important updates to the curriculum.

7 Course Statements

7.1 Late or Missed Assessments

Tutorial Exercises

- Late Tutorial Exercises will be penalized 10% for each 24 hour period and will not be accepted more than 72 hours late.

- Makeup assignments will not be offered for any missed Tutorial Exercises.
- If you anticipate a late submission for a Tutorial Exercise, contact the course email address as soon as possible.

Midterm Exams

- If you miss a midterm exam, contact the course email address as soon as possible.
- If you miss a midterm exam due to illness or for other reasons officially recognized by the university, your final grade may be reweighted towards other course components or you may be required to write a term paper on a mutually-agreed topic closely linked to the course content.
- We will not offer makeup exams except for the most extenuating of circumstances.

Please note: policies for late/missed assignments are subject to change.

8 College of Biological Science Statements

8.1 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.
- Student Health Services is located on campus and is available to provide medical attention.
- 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/>

8.2 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>)

8.3 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.

DRAFT