BIOLOGY 1001A—Biology for Science I

Calendar Description

The principles of biology taught using an integrative, question-based approach. Topics include inheritance, evolution, and ecology. This course is intended for students registered in the Faculty of Science.

Prerequisite(s): Grade 12U (SB14U) Biology or Grade 11U (SB13UA) Biology and permission of the Department. A minimum mark of 80% in Grade 12 U Biology (SB14U) is recommended for students registered in a faculty other than the Faculty of Science.
Anti-requisites: Biology 1201A, Biology 1225

Unless you have either the requisites for this course or written special permission from your Dean to enrol in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

Timetable

Summer Day 2019

Face-to-Face (in FNB 2210):
Tues/Thurs 10:00–12:00 pm
Drop-in: Fri 10:00-12:00 pm

Skill sessions (in NCB 310):
Tues/Thurs 1:00–4:00 pm

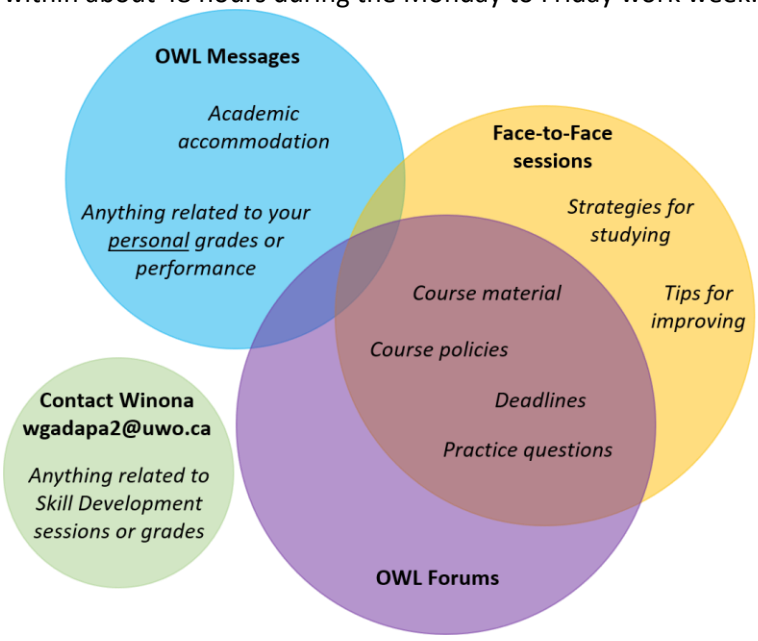
This course is structured to include significant independent study time (i.e. outside of traditional 'lecture' hours) by the student. More information about the structure of the course (including the role of and distinction between Face-to-Face, Skills, and Drop-in sessions will be provided in an introductory video available on the OWL course website under Course Content.

Instructor Information

Jennifer Peter (course chair)

As you move through the course, you may find you have questions or need clarification. There are several ways to connect with me; this Venn diagram highlights the appropriate methods for some common topics.

You can expect a response to an OWL Message or Forum posting within about 48 hours during the Monday to Friday work week.



Course Objectives

By the end of this course, a successful student will be able to:

- Correctly use and apply vocabulary associated with inheritance, evolution, and ecology;
- Use an understanding of evolutionary and ecological processes to interpret biological phenomena;
- Apply and integrate concepts related to variation, inheritance, and evolution to explain diversity;
- Use common biological tools and techniques to collect and analyze data.

Required Materials

These materials are "required" in that each student needs *access* to them to be successful in the course. Whether that access is individual, shared by a group of individuals, or borrowed from the commons (e.g. libraries, etc.) is up to you. In addition these three main resources, we will occasionally use articles, videos, and applets available freely online to supplement your learning. ***If you discover any (open access) resources that are helpful to you for this course, I encourage you to share the details with the rest of the class!***

OWL Course Site:
Biology 1001A 201 SU19
Login with UWO ID and password at owl.uwo.ca

The OWL site is used **heavily**. It provides:

- Content for independent study (lecture videos, readings, etc.)
- Access to quizzes
- Practice questions
- Communication tools

CENGAGE | MINDTAP

Textbook: Russell et al. 2018. *Biology: Exploring the Diversity of Life,* 4th Canadian Edition

You will be asked to read parts of the textbook as independent study. The book is available in both paper ($132.55) or digital ("MindTap" subscription, $98.90) format from the UWO bookstore. More information on the OWL site.

Skills sessions materials:

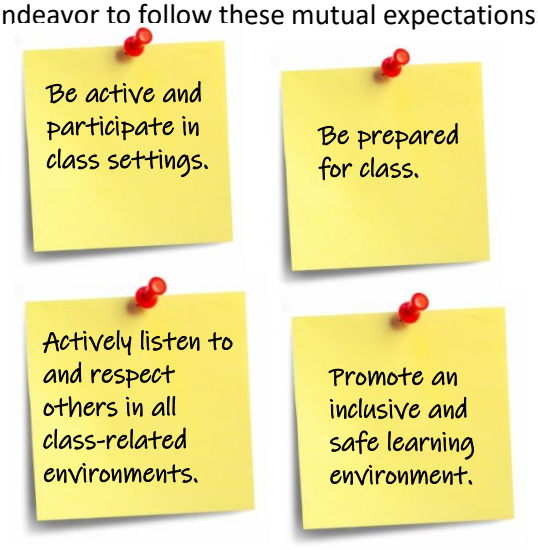
- Lab coat
- Safety glasses

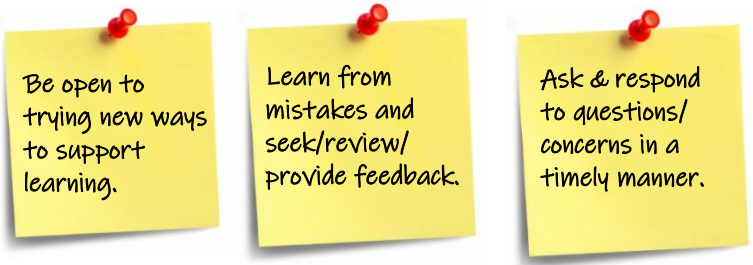
These items can be purchased from the UWO bookstore. If you have these items from a chemistry course, they will be suitable for Biol 1001/1002.

No lab manual is required.

Expectations

To help maintain a safe, respectful, and productive community in which we—**students and teaching team alike**—can take risks in our learning/teaching, tackle challenging concepts, and ultimately grow as scientists, we should endeavor to follow these mutual expectations:





In addition to these expectations, there are some not-always-obvious expectations associated with academia where **intellectual property rights**, and **academic integrity**, and **confidentiality** are important. Ask for *written* permission before:

- making an audio recording of class;
- sharing/reproducing/distributing course materials (for free or for profit).

Evaluation Scheme

This is the initial breakdown of grades for the course; see more information under ***Flexible grading***.

Course Component	Weight	'Due Date'
Course Structure Quiz	1%	11:59 pm on Thurs., July 11th
Quizzes	5%	deadlines posted to OWL
Online Assessment	4%	due Monday, July 15th, time to be announced
Skills	20%	First session: Thurs., July 11th, 1:00 pm
Midterm	26%	Sat, July 20th, 12:00 noon
Final Exam	44%	Mon, July 29th, 2:00-5:00 pm

Course Structure Quiz: A quiz administered through OWL Test & Quizzes, assessing understanding of course policies and structure as described in this course syllabus and the OWL course website. More detailed information about structure and content of this quiz is provided in the description of the quiz, available on the course website under **Tests & Quizzes → Course Structure Quiz**. *No accommodation* will be made after the deadline for any reason (e.g., technical problems or late registration in the course); attempt the quiz early during the availability period so that any problems that arise can be dealt with before the deadline.

Quizzes: Short multiple choice and/or short answer quizzes to motivate continual engagement with course material on a regular basis. Questions test on material from Independent Study tasks, unless specified otherwise. Not considered reflective of exam-level difficulty. *No accommodation* will be made after the deadline for each Quiz for any reason (e.g., technical problems, forgotten deadline, etc.). Quizzes are typically available for 36 h before their due date.

Each Quiz is assigned a number of points based on the number of questions in the Quiz. At the end of the course, the number of points a student has accumulated by answering Quiz questions correctly will be summed and expressed as a percentage out of the total number of points 'offered' across all Quizzes to determine the student's final Quizzes mark for the course, using the conversion scheme presented in the table shown at right.

Points collected (% total offered)	Final Quizzes Mark (/5%)
0	0
0 < % answered < 20	1
20 ≤ % answered < 40	2
40 ≤ % answered < 60	3
60 ≤ % answered < 80	4
80 ≤ % answered ≤ 100	5

Online Assessment: A short (e.g. ~30 min), online assessment testing you on course material from the first week of the course. Questions (multiple choice, true/false, short answer) will be approximately exam-level difficulty. Students will have a two-hour window to begin and complete the Online Assessment through the OWL course site. More information on the structure and coverage will be posted to the OWL course site. There is no make-up or extension for the Online Assessment for any reason (accommodated or not); students who do not complete the Online Assessment during the availability period will automatically have their final course grade calculated under Scenario 2, 4, or 5 (see Flexible Grading, below)—whichever scenario results in the highest possible grade.

Skills sessions: The Skills component of this course will help students enhance their literacy, practical, and critical thinking skills in collaborative settings with graduate student teaching assistants as facilitators. These sessions begin the **first Thursday** of the course at **1:00 pm in NCB 310**. Each Skills session will take the full 3-hour period. Students should come prepared with their lab coat and safety glasses for this first session, and all subsequent sessions.

Midterm: The Midterm is a *cumulative*, 3-hour exam assessing understanding, application, and integration of course material (including material from Skills sessions). Students should expect multiple choice and/or short answer questions. More detailed information about structure and content of the exam will be provided on the course website. Students who fail to write the Midterm for any reason must receive academic accommodation for their absence; otherwise, a grade of zero will be awarded for failing to write the Midterm. A zero for failing to write the midterm exam cannot be compensated by the Flexible Grading described below.

Final Exam: The Final Exam is a *cumulative*, 3-hour exam assessing understanding, application, and integration of course material (including material from Skills sessions) across the entire course. Students should expect multiple choice and/or short answer questions. More detailed information about structure and content of the exam will be provided on the course website. Students who fail to write the Final Exam for any reason must receive academic accommodation for their absence; otherwise, a grade of zero will be awarded.

Flexible Grading: The Online Assessment ("OA"), Midterm, and Final Exam have flexible weightings, dependent on your individual success for each component. Each of these assessments is initially worth a set amount of your final grade (see Scenario 1 below). However, your final course grade will ***automatically*** be calculated under each of the scenarios (S1-S5) in the table below; whichever scenario gives you the highest final course grade will be used when submitting your course grade.

Item	S1	S2	S3	S4	S5
OA	4%	0%	4%	0%	0%
Midterm	26%	30%	16%	16%	0%
Final	44%	44%	54%	58%	74%

The purpose behind the Flexible Grading scheme is to provide you with multiple opportunities during the course for feedback on your understanding of course material under exam-style conditions. Allowing the weight of the assessments to be reduced or dropped completely (depending on the Scenario, above) means that—if you discover that your understanding is not complete or you perform below your desired level of success during the assessment—you still have other opportunities to improve on your achievement for that component of the course grade on subsequent assessments (i.e. after you seek additional help/clarification to improve your mastery of the material). Because all assessments in this course are cumulative, the relative weighting of 'early' versus 'late' course material will be approximately equivalent under each scenario (this is achieved by always shifting the weight of early assessments onto later assessments.

Comments on Assessments

Non-programmable calculators are permitted for use during all graded components of the course. No other aids are allowed. **Cellular phones, iPods, and other similar technology are *not* permitted in the test/exam room.** This means that cellular phones, iPods, and other similar technology **cannot** be used as a timekeeper/clock, calculator, or for any other purpose.

It is Faculty of Science policy that a student who chooses to write a test or exam deems themselves fit enough to do so, and the student must accept the mark obtained. Claims of medical, physical, or emotional distress after the fact will not be considered.

None of the components of this course will be re-weighted (beyond what is described in this syllabus) nor will additional assignments be accepted to accommodate perceived poor performance on an assessment item, or for absence(s) for which accommodation has not been recommended by academic counseling. No special rounding rules (e.g. to meet GPA cut-offs, minimal requirements for programs/continuation, etc.) are applied in this course when calculating final grades.

'999 Students' repeating the course

Students who are repeating Biology 1001A (or are taking this course as a repeat of Biology 1201A) should be registered in *lab section 999* and are referred to as '999 students'. Students who are repeating the course have the option of using their Skills (i.e. lab) marks from the previous term they took Biology 1001A/1201A as their mark for the Skills component of this Summer Day session. Choosing to use the previous term's lab/tutorial marks is referred to as a Skills 'exemption'.

If you have previously taken and completed Biology 1001A or Biology 1201A, and are consequently repeating the course, you must read the information on the OWL site under Course Content → Administration → Skills exemption form for 999 students". This information describes steps each 999 student must complete (including filling out an exemption form) by the **first Wednesday of the course**.

999 students who choose to be exempt from the Skills sessions are responsible for ensuring that they understand the Skills material/techniques, as they will be held accountable for this material in class and/or on exams. Exemption from Skills sessions will not be accepted as an excuse for poor performance on, and/or failure to answer course components that relate (either directly or indirectly) to that component of the course.

Policy for missed Tests/Exams

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or supporting documentation to the Academic Counselling Office of your home faculty as soon as possible. If you are a Science student, the Academic Counselling Office of the Faculty of Science is located on the second floor of North Campus Building, and can be contacted at scibmsac@uwo.ca.

For further information, please consult the university's medical illness policy at http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf

If you miss the Final Exam, please contact your faculty's Academic Counselling Office as soon as you are able to do so. They will assess your eligibility to write the Special Exam (the name given by the university to a makeup Final Exam).

You may also be eligible to write the Special Exam if you are in a "Multiple Exam Situation" (see http://www.registrar.uwo.ca/examinations/exam_schedule.html)

Students who miss a graded component in this course and do **not** receive appropriate accommodation from their Dean's Office will be awarded a '0' for that component unless otherwise described above. ***This applies to the Skills, Midterm, and the Final Exam. Refer to the above descriptions of the other Biology 1001A assessment components for potential exceptions to this policy (i.e. online assessment, quizzes, etc.)***

Academic Policies

The website for Registrarial Services is http://www.registrar.uwo.ca

In accordance with policy, http://www.uwo.ca/its/identity/activatenonstudent.html, the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner.

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at this website: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf.

Computer-marked, multiple-choice tests and exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (http://www.turnitin.com).

During tests/exams, proctors will inspect all personal belongings on your desk (and even your baseball cap if you are wearing one). If any items are discovered that are not permitted (e.g. any electronic device other than a non-programmable calculator, or notes) they will be confiscated and the incident will be officially reported as an academic offence. Proctors have the discretion to move students between desks during the Tests or Exam periods.

Support Services

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 ext. 82147 if you have questions regarding accommodation.

The policy on Accommodation for Students with Disabilities can be found here:
www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_disabilities.pdf

The policy on Accommodation for Religious Holidays can be found here:
http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf

Learning-skills counsellors at the Student Development Centre (http://www.sdc.uwo.ca) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Students who are in emotional/mental distress should refer to Mental Health@Western (http://www.health.uwo.ca/mental_health) for a complete list of options about how to obtain help.

Additional student-run support services are offered by the USC, http://westernusc.ca/services.

Date	Independent Study Topic(s)	Face-to-Face session (10:00 am–12:00 noon)	Assessments
July 8	Introductory video HIV		
July 9	Genomic variation	Introduction to course Answering student questions	
July 10	Genomic replication		
July 11	Inheritance of sameness	Genomic variation Genomic replication	*Quiz due by 10 am:* ISQ-genetic variation *Quiz due by 10 am:* ISQ-genetic replication **Course Structure Quiz (1%) due**
July 12	Origin of variation I Origins of variation II	Review/Help period	*Quiz due by 10 am:* ISQ-inheritance of sameness
July 15	Meiosis		**Online Assessment due (time to be announced) (4%)**
July 16	Inheritance of variation	Inheritance of sameness Origins of variation I & II	*Quiz due by 10 am:* ISQ-Origins of variation I *Quiz due by 10 am:* ISQ-Origins of variation II
July 17	Inheritance in populations Selection and fitness		
July 18	Evolutionary forces Why evolution is true	Meiosis Inheritance of variation	*Quiz due by 10 am:* ISQ-Meiosis *Quiz due by 10 am:* ISQ-Inheritance of variation
July 19	(review day!)	Review/Help period	
Sat, July 20	**Midterm (26%) at 12:00 noon in NSC 7**		
July 22	Why sex? Sexual selection		
July 23	Cooperation and conflict Speciation	Inheritance in populations Selection and fitness Evolutionary forces	*Quiz due by 10 am:* ISQ-inheritance in populations *Quiz due by 10 am:* ISQ-Evolutionary forces
July 24	Phylogeny		
July 25	Evolutionary ecology Arms races	Speciation Phylogeny	*Quiz due by 10 am:* ISQ-Speciation *Quiz due by 10 am:* ISQ-Phylogeny
July 26	(review day!)	Review/Help period	
Mon, July 29	**Final Exam (44%), 2:00 pm to 5:00 pm in NSC 7**		