

Biology for Science II (B1002B) Course Outline

1. Course Information

Course Information

Biology for Sciences II (B1002B), FW24 is offered in-person format. Certain digital platforms used (SimUText and MindTap) will require students to work online. Lectures are synchronous and in-person in the rooms specified above. Students will attend live session with the professor twice per week (Mon-Wed or Tue-Thurs, depending on their Western Timetable) where they will watch the lecture, take notes and participate in some active learning. Skill Development (Labs) sessions are delivered synchronously in-person (room numbers posted on OWL course site). Office hours will be delivered in-person (date, time and room locations are all posted on the OWL course site).

List of Prerequisites

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. Note: The combination of Biology 1001A and 1002B (with appropriate marks) are the prerequisites for senior Biology courses and admission to modules offered by the Department of Biology and the Basic Medical Science Departments

Unless you have either the requisites for this course or special permission the biology department. See this URL for procedures:

https://www.uwo.ca/sci/advising/procedures/special_permissions/missing_prerequisite.html
to enroll 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.

2. Instructor Information

Instructors	Email	Office	Phone	Office Hours
Dr. Niki Sharan (Course Coordinator and Instructor)	nsharan@uwo.ca	Check OWL	519-661-2111 X86502	Check OWL
Dr. Denis Maxwell (Instructor)	dmaxwell@uwo.ca	Check OWL	519-661-2111 X81336	Check OWL
Ms. Winona Gadapati (Lab Coordinator)	wgadapa2@uwo.ca	Check OWL	519-661-2111 X81141	Check OWL

Students must use their Western (@uwo.ca) email addresses when contacting their instructors.

The first point of contact for all administrative questions in this course is the Discussion Forum on Brightspace. You must post your question under the correct heading, otherwise it will not be answered. If your question is personal or complicated, please contact the First Year Biology course coordinator, Dr. Niki Sharan and the Skill Development coordinator Ms. Winona Gadapati (nsharan@uwo.ca or wgadapa2@uwo.ca). Do not contact Dr. Maxwell for any questions other than his lecture content (which should be posted to Discussion Forum on Brightspace and not emailed to him directly). He is not responsible for any administrative component of the course. When you email Niki Sharan or Winona Gadapati, be sure to put in your e-mail 1002B, your full name as it appears at the registrar's office, student number and lab section number, and a clear description of your issue. We can only respond to e-mails that come from your official Western e-mail account. We do not respond to emails received from non-uwo accounts (eg, gmail, hotmail, yahoo etc).

3. Course Syllabus, Schedule, Delivery Mode

Biology 1002B is designed to help students in the Faculty of Science and Faculty of Health Science build on the knowledge and skills acquired in Secondary School Biology as preparation for success in second year programs in the Biological Sciences.

By engaging in this learning environment, students can expect to enhance their ability to:

1. Build productive academic relationships with diverse members of the FYB community.
2. Collaborate with peers and/or instructors to create consensus around diverse ideas (e.g. during classes, studying, preparing team assignments).
3. Apply effective learning strategies to academic work.
4. Demonstrate a broad understanding, application, and analysis, of evolutionary principles pertaining to the origin and inheritance of genetic variation.
5. Communicate scientific ideas to an audience of peers and/or instructors in written, oral and graphic formats.
6. Apply scientific experimental design, equipment, skills and analyses to test hypotheses.
7. Locate, evaluate, and extract scientific ideas from academic and non-academic literature; ethically incorporate such ideas into academic work.

Both the lectures and the lab components of the course are offered in-person. Please see your Western Timetable and Brightspace course site for details on day, time and location.

Class Schedule:

Week of	Cycle #	Lecture #	Biology 1002B Class Schedule Winter 2025	Professor	
6-Jan	1	1	Cycle 1: Chlamydomonas and the Origin of Life	Maxwell	
		2			
13-Jan	2	3	Cycle 2: Trapping Light for Energy and Information		
		4			
20-Jan	3	5	Cycle 3: Thermodynamics and Membrane		
		6			
27-Jan	4	7	Cycle 4: Primary Metabolism		
		8			
3-Feb	5	9	Cycle 5: Integrated Metabolism		
		10			
10-Feb	6	11	Cycle 6: Endosymbiosis and Multicellularity		
		12			
Reading Week: Feb 15-23; No lectures or skill development sessions					
24-Feb	7	13	Cycle 7: Transcription and Translation	Sharan	
		14			
3-Mar	8	15	Cycle 8 : Control of Gene Expression		
		16			
Midterm Exam : Sat, March 8th, 2:00 -4:00 PM (Room numbers TBA) - Covers Cycles 1-7, inclusive					
10-Mar	9	17	Cycle 9: Genetics of Cancer and Other Diseases		
		18			
17-Mar	10	19	Cycle 10: DNA Technologies		
		20			
24-Mar	11	21	Cycle 11: Epigenetics		
		22			
31-Mar	N/A	N/A	No Classes - Take this time to review. Classes End April 4th		
Final Exam date and time to be announced by registrar's office - See Western Exam Schedule in April					

Lab Schedule:

Module #	Week 1 sections	Week 2 sections
Module 1	Jan 20-24	Jan-27- 31
Module 2	Feb 3-7	Feb 10-14
Module 3	Feb 24-28	Mar 3-7
Module 4	Mar 10-14	Mar 17-21

Reading week - no labs the week Feb 17-21

Key Sessional Dates

Classes begin: January 6, 2025

Midterm Exam – March 8, 2025 from 2-4 PM (Rooms to be posted on OWL closer to midterm)

Spring Reading Week: February 15 – 23, 2025

Classes end: April 4, 2025

Exam period: April 7-30, 2025

4. Course Materials

The following course materials are a requirement for this course:

1. Textbook (5th edition). Other editions (eg, 4th) etc will not suffice. You must use the 5th edition as many revisions have been made to this new edition. The electronic version of the textbook is called MindTap and is sold for \$95 CAD at the Western bookstore. If you prefer the print version, you can purchase that at the bookstore too for a higher price. For information on how to register for and use MindTap, please go to this URL:

https://www.cengage.com/coursepages/WU_W25_BIO1002B

You don't need both electronic and print copies of the textbook.. But if you wish to purchase both you may do so. You have the option to use a second-hand version of the 5th edition print copy if you wish.

All materials are available for purchase at the uwo bookstore (online or in-person). If you already purchased these resources for B1001A in Fall 2024, you will not need to repurchase them.

A Personal Response System called “iClickers” will be used during lectures. These do not count for grades. They are for class participation only. Participation is encouraged but not mandatory.

All course material will be posted to OWL Brightspace: <https://westernu.brightspace.com/d2l/home>

Students are responsible for checking the course OWL Brightspace site on a regular basis for news and updates. This is the primary method by which information will be disseminated to all students in the class.

If students need assistance with the course OWL Brightspace site, they can seek support on the Brightspace Help page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

Technical Requirements

Your weekly OWL quizzes and lab assignments and other digital tools will require you to have a working computer with a very stable internet connection.

5. Methods of Evaluation

The overall course grade will be calculated as listed below:

OWL Quizzes	12%
Skill Development	20%
Midterm Exam	33%
Final Exam	35%

The Midterm Exam will cover material from Cycles 1-7, inclusive. The midterm will take place Saturday, March 8, 2025 from 2:00 – 4:00 PM (Room numbers will be posted on OWL Brightspace closer to the midterm date). There will be a midterm make-up exam (exact date, time and room will be posted on OWL Brightspace closer to March). The make-up exam is not a rewrite. It is only for those students who did not write the originally scheduled midterm. In order to miss the midterm, you **MUST** submit your Academic Consideration request using the Student Absence Portal. This is mandatory. Here is the URL for the student absence portal:

https://registrar.uwo.ca/academics/academic_considerations/index.html

Failure to do so will lead to a grade of zero on the midterm. Once your request is approved, you will receive permission to write the make-up midterm. Undocumented absences are not accepted for this assessment. You must provide documentation for your reason of absence

In order to pass the course, you must receive a grade of 50% or above and must pass the skill development portion of the course. A score of 60% or above is considered a passing grade for skill development. If you do not pass the skill development portion of the course but receive a grade of 50% or above in the course, you will receive an incomplete grade (called INC) and must repeat **only** the skill development portion of the course (not the entire course) during a future offering of the course (summer 2025 or fall 2025). Exceptions may be made if you need to complete it after fall 2025. If you failed the course (or choose to repeat the course to improve your grade) and have passed skill development (60% or over), then you can transfer your skill development grade to your next course attempt. Your passing skill development grade from your previous attempt will be applied to your repeated attempt while calculating your final course grade (in other words, you don't have to repeat skills if you passed it).

IMPORTANT: If you miss more than 1 skill development session in B1002B, you will not pass the skill development portion of the course. In order to pass skill development, you cannot miss more than 1 session.

Alternate grading

Since the Final Exam is cumulative, you can get 2 chances to show your understanding of the course content. For example, if you do better on the final exam, half the weight of the midterm (16.5%) will be transferred to the Final Exam weight. If you miss the Midterm, the weighting of your final grade will change. As shown in the Table below, we will calculate your Final Grade in 2 different ways and whichever distribution works in your favour will be your final grade (ie, the highest grade). Weights below don't include Quizzes (12%) and Skill Development (20%).

	Standard	Midterm Low	Midterm Miss
Midterm	33	16.5	0
Final Exam	35	51.5	68
Total	68	68	68

6. Student Absences

If you need to miss any assessments in this course, with exception of OWL quizzes, you must submit your request through the **student absence portal**. See **URL link below**:

https://registrar.uwo.ca/academics/academic_considerations/index.html

Missed OWL Quizzes:

The OWL Quizzes are assessment with a built-in flexibility (10% bonus will be added to your overall quiz grade to compensate for loss due to missed quizzes). They are due one every Sunday at 11:00 PM EST. Since there is build-in flexibility for these quizzes, you CANNOT request Academic Consideration in form of deadline extension or reweighing of grades.. There are no make-up quizzes. If you miss a quiz, you will receive a grade of zero for that particular missed quiz. The quiz is delivered asynchronously on OWL (testing window is Thurs - Sun). Choose the day that is convenient for you to complete and submit the quiz. If you are not able to complete a quiz and miss it, we will compensate for your missed quizzes by adding 10% bonus to your overall quiz grade at the end of the term (to a maximum of 100%; you cannot receive a grade beyond 100%). There are various reasons for which you may miss a quiz (medical absence, technical difficulties, forgetting to submit, error in submitting, religious holidays, varsity event, other commitments). The 10% bonus will make-up for any quiz that you missed for whichever reason applies to you.

Missed Skill Development Sessions (Labs)

Labs in this course are called “Skill Development” (or Skills for short). If you need to miss a skills session, you must **submit your request through the student absence portal**. This is mandatory otherwise you will receive a grade of zero for the missed session. **Undocumented absence CANNOT be applied to request academic consideration for skills. You must provide documentation for your reason of absence.**

See URL link below for the student absence portal:

https://registrar.uwo.ca/academics/academic_considerations/index.html

Once you have submitted your request, you will receive an automated confirmation email to let you know if it has been approved or denied. If approved, the confirmation email will provide you with information about a possible make-up date. If you are concerned or worried for any reason, please contact the skill development coordinator, Ms. Winona Gadapati, at wgadapa2@uwo.ca no more than **48 hours** after your scheduled lab session that you missed or will be missing.

If you miss any skill development session during the term, you will not qualify for bonus skill development grades that **may or may not be given** at the end of the term. The only way to receive the **potential** bonus grade is to attend all skill development sessions without missing a single one.

IMPORTANT: If you miss more than 1 skill development session in B1002B, you will NOT pass the skill development portion of the course. In order to pass skill development you cannot miss more than 1 session.

The Student Medical Certificate is available at

<https://registrar.uwo.ca/academics/pdfs/student-medical-certificate.pdf>

Here is also a link to the OOR Academic Consideration webpage:

https://registrar.uwo.ca/academics/academic_considerations/

Missed Midterm

There is one midterm exam in this course worth 33% of the overall course grade. It will take place in March. If you miss the midterm without academic consideration, you will receive a grade of zero. If you miss the Midterm WITH academic consideration, then you will be qualified to write the make-up midterm.

There is a Make-up for the Midterm Exam. Make-up midterm is only available to students who have been granted academic consideration to miss the midterm.

It is important to note that Make-up midterm is not a rewrite. In other words, if you wrote the originally scheduled Midterm, you are not permitted to write the make-up midterm. Therefore, if you think you cannot write the midterm for any reason, you **MUST** submit your request to miss the midterm via the student absence portal. Once you write the originally scheduled midterm, it is too late to get exemption and reweighing of your final grade! If you miss the midterm without academic consideration, you will receive a grade of zero. If you miss the midterm WITH academic consideration you will have permission to write the Make-up midterm. If you cannot write the make-up midterm you need to obtain **ANOTHER** academic consideration via the student absence portal in order to be excused from writing the make-up midterm. If you miss **BOTH** the regular midterm and the Make-up midterm with academic consideration, the weight of the midterm will be transferred to your Final Exam.

If you need to miss the midterm, you must **submit your request through the student absence portal**. This is mandatory otherwise you will receive a grade of zero on the midterm. **Undocumented absence CANNOT be applied to request academic consideration for midterm. You must provide documentation for your reason of absence.**

See URL link below for the student absence portal:

https://registrar.uwo.ca/academics/academic_considerations/index.html

Once you have submitted your request, you will receive an automated confirmation email to let you know if it has been approved or denied. If approved, you can write the make-up. If you are concerned or worried for any reason, please contact the course coordinator, Dr. Niki Sharan at nsharan@uwo.ca.

Absences from Final Examinations

There is one final exam in this course worth 35% of the overall course grade. It will take place in April. If you miss the final exam without academic consideration, you will receive a grade of zero. If you miss the final exam WITH academic consideration, then you will be qualified to write the make-up final.

There is a Make-up for the Final Exam. Make-up final is only available to students who have been granted academic consideration to miss the final exam in the original scheduled date.

It is important to note that Make-up final is not a rewrite. In other words, if you wrote the originally scheduled final, you are not permitted to write the make-up final. Therefore, if you think you cannot write the final for any reason, you MUST submit your request to miss the final via the student absence portal. Once you write the originally scheduled final, it is too late to get exemption and reweighing of your final grade! If you miss the final without academic consideration, you will receive a grade of zero. If you miss the final WITH academic consideration you will have permission to write the Make-up final. If you cannot write the make-up final you need to obtain ANOTHER academic consideration via the student absence portal in order to be excused from writing the make-up final. If you miss BOTH the regular final and the Make-up final with academic consideration, your grade will be entered as "SPC". You will have the opportunity to write the final exam during the next offering of the course after which your SPC grade will be changed to your numerical grade.

If you need to miss the final exam, you must **submit your request through the student absence portal**. This is mandatory otherwise you will receive a grade of zero on the final exam. **Undocumented absence CANNOT be applied to request academic consideration for the final exam. You must provide documentation for your reason of absence.**

See URL link below for the student absence portal:

https://registrar.uwo.ca/academics/academic_considerations/index.html

Once you have submitted your request, you will receive an automated confirmation email to let you know if it has been approved or denied. If approved, you can write the make-up final. If you are concerned or worried for any reason, please contact the course coordinator, Dr. Niki Sharan at nsharan@uwo.ca.

6. Accommodation and Accessibility

Religious Accommodation

Please see diversity calendar posted on the Office of Equity, Diversity and Inclusion Office:

<https://www.edi.uwo.ca>

Accommodation Policies

Students with disabilities are encouraged to contact Accessible Education, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf.

7. Academic Policies

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

In accordance with policy,

https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf,

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 their official university address is attended to in a timely manner.

Pencils, erasers and a non-programmable basic calculator are permitted during the midterm exam and final exam. No other items are permitted.

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

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.

iClickers will be used during lecture to encourage participation and active learning. iClicker participation doesn't count for grades. Although iclickers may be used for data gathering by the instructor, the student's privacy will always be protected. Students must ensure that their iclicker is not being used by anyone else other than themselves.

8. Support Services

Please visit the Science & Basic Medical Sciences Academic Counselling webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters: <https://www.uwo.ca/sci/advising/>

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

Western is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at

https://www.uwo.ca/health/student_support/survivor_support/get-help.html.

To connect with a case manager or set up an appointment, please contact support@uwo.ca.

Please contact http://academicsupport.uwo.ca/accessible_education/index.html 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 Accessible Education at if you have any questions regarding accommodations.

Learning-skills counsellors at the Student Development Centre (<https://learning.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.