

Biology for Science II (B1002B) Course Outline

1. Course Information

Course Information

Biology for Sciences II (B1002B), FW25 is offered in an in-person format. Lectures are delivered synchronously and in person. Students will attend live sessions with the professor twice per week, depending on their Western Timetable. During lectures, students will watch the lecture, take notes, and participate in active learning activities.

Skill Development lab sessions are delivered synchronously and in person, with room numbers posted on the Brightspace course site. Office hours are also delivered in person, with dates, times, and room locations posted on the Brightspace course site.

List of Prerequisites

Grade 12U Biology (SB14U) or Grade 11U Biology (SB13UA), and permission of the Department, are required. A minimum mark of 80% in Grade 12U Biology (SB14U) is recommended for students registered in a faculty other than the Faculty of Science.

Note that the combination of Biology 1001A and Biology 1002B, with appropriate marks, serves as the prerequisite for senior Biology courses and for admission to modules offered by the Department of Biology and the Basic Medical Science Departments.

Students who do not meet the prerequisites for this course, or who do not have written special permission from the Department of Biology, may be removed from the course in accordance with university policy. This removal may occur after the add drop deadline of the academic term, and the course will be recorded as withdrawn (WDN) on the student's academic record. This decision is final and may not be appealed.

2. Instructor Information

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

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 more complicated, please contact the First Year Biology course coordinator, Dr. Niki Sharan, and the Skill Development coordinator, Ms. Winona Gadapati, at nsharan@uwo.ca or wgadapa2@uwo.ca. Please do not contact Dr. Maxwell for any questions other than those related to his lecture content. Lecture related questions should be posted to the Discussion Forum on Brightspace and should not be emailed to him directly. Dr. Maxwell is not responsible for any administrative components of the course.

When emailing Dr. Sharan or Ms. Gadapati, be sure to include Biology 1002B in the subject line, your full name as it appears in the Registrar's records, your student number, your lab section number, and a clear description of your issue. We can only respond to emails sent from your official Western email account. Emails sent from non-Western accounts such as Gmail, Hotmail, or Yahoo will not receive a response.

Both Dr. Maxwell and Dr. Sharan will hold weekly in person office hours. Dates, times, and room numbers are posted on Brightspace.

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. This course introduces students to foundational concepts in molecular and cellular biology, including protein structure and function, enzyme activity, bioenergetics, gene regulation, genome organization, and molecular evolution. Students examine how genetic information is expressed and regulated in prokaryotic and eukaryotic systems and how energy flow supports cellular growth and metabolism. The course also develops core scientific skills such as data analysis, evaluation of scientific sources, interpretation of primary literature, and collaborative problem solving.

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.

Key Sessional Dates

Classes begin: January 5, 2026

Spring Reading Week: February 14 – 22, 2026

Midterm Exam: Saturday, March 7, 2026

Classes end: April 9, 2026

Exam period: April 12 – 30, 2026

Class Schedule:

Week of	Cycle #	Lecture #	Biology 1002B Class Schedule Winter 2026	Professor	
5-Jan	1	1	Cycle 1: Chlamydomonas and the Origin of Life	Maxwell	
		2			
12-Jan	2	3	Cycle 2: Trapping Light for Energy and Information		
		4			
19-Jan	3	5	Cycle 3: Thermodynamics and Membrane		
		6			
26-Jan	4	7	Cycle 4: Primary Metabolism		
		8			
2-Feb	5	9	Cycle 5: Integrated Metabolism		
		10			
9-Feb	6	11	Cycle 6: Endosymbiosis and Multicellularity		
		12			
Reading Week: Feb 14-22; No lectures or skill development sessions					
23-Feb	7	13	Cycle 7: Transcription and Translation	Sharan	
		14			
2-Mar	8	15	Cycle 8: Control of Gene Expression		
		16			
Midterm Exam : Sat, March 7th, 2:00 -4:00 PM (Room numbers TBA) - Covers Cycles 1-7, inclusive					
9-Mar	9	17	Cycle 9: Genetics of Cancer and Other Diseases		
		18			
16-Mar	10	19	Cycle 10: DNA Technologies		
		20			
23-Mar	11	21	Cycle 11: Epigenetics		
		22			
30-Mar	N/A	N/A	No classes. Practice final. Attend professor Q & A sessions and BMP review sessions. Classes End April 9		
Final Exam date and time to be announced by registrar's office - See Western Exam Schedule in April					

Lab Schedule:

In this course, laboratory sessions are referred to as Skill Development (or Skills for short). Skills are held bi-weekly, with students attending one session every two weeks according to their assigned schedule. Skills have a staggered start, and students will be designated as Week 1 or Week 2. Week 1 students begin the week of January 19, and Week 2 students begin the week of January 26. Once started, skills continue bi-weekly for the remainder of the term. Students will complete four Skill Development modules, each consisting of a 3- hour session scheduled according to their timetable. All skills dates, start times, room numbers, and group assignments are posted on Brightspace under the Skill Development tab.

Module #	Week 1 sections	Week 2 sections
Module 1	<i>Jan 19-23</i>	<i>Jan-26-30</i>
Module 2	<i>Feb 2-6</i>	<i>Feb 9-13</i>
Module 3	<i>Feb 23-27</i>	<i>Mar 2-6</i>
Module 4	<i>Mar 9-13</i>	<i>Mar 16-20</i>
<i>Reading week - no labs the week Feb 16-20</i>		

Students are responsible for checking the course 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 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 Brightspace quizzes, lab assignments, and other digital tools require access to a reliable computer with a stable internet connection. If you purchased the textbook for B1001A, you do not need to purchase a new textbook for B1002B, as the same textbook is used. If you do need to purchase the textbook, please use the link below, which will take you to the Western Bookstore where pricing information for the B1002B textbook is available. [URL for B1002B Textbook](#). You must purchase this edition as previous editions or second-hand version will not suffice. The textbook is digital version called “MindTap”. It comes with many additional features such as activities and practice questions associated with each chapter.

5. Methods of Evaluation

The overall course grade will be calculated as listed below:

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 on Saturday, March 7, 2026, from 2:00 to 4:00 PM. Room information will be posted on Brightspace closer to the exam date.

A midterm make up exam will be offered for students who do not write the originally scheduled midterm. The make up exam is not a rewrite. The date, time, and room will be posted on Brightspace closer to March. To be eligible, students must submit an Academic Consideration request through the Student Absence Portal (link below).

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

An approved request is required to avoid zero on the midterm. Undocumented absences are not accepted for this assessment.

Undocumented absences are accepted for Skill Development.

Completion Requirements

To pass the course, you must meet **both** the following conditions:

1. Pass the Skill Development component (a pass is 60% and you cannot miss more than one skills session).
2. Achieve an overall course grade of 50% or higher.

If Skill Development is not completed:

If you achieve an overall course grade of 50% or higher, including the final exam, but do not pass Skill Development, you will receive an Incomplete (INC) grade. Students with an INC must complete only the Skill Development component the next time the course is offered (Summer term).

If you failed the course (or choose to repeat the course to improve your grade) and have passed the skills development (60% or over), then you can transfer your skill development grade to your next course attempt.

IMPORTANT: If you miss more than 1 skill development session, 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

Use of Generative AI Tools

There is no university-wide policy governing the use of generative AI tools in coursework or assessments. Use of Generative AI is prohibited in this course.

General information about missed coursework

Students must familiarize themselves with the *University Policy on Academic Consideration – Undergraduate Students in First Entry Programs*, posted on the Academic Calendar: https://uwo.ca/univsec//pdf/academic_policies/appeals/academic_consideration_Sep24.pdf,

This policy does not apply to requests for Academic Consideration submitted for **attempted or completed work**, whether online or in person.

The policy also does not apply to students experiencing longer-term impacts on their academic responsibilities. These students should consult [Accessible Education](#).

For procedures on how to submit Academic Consideration requests, please see the information posted on the Office of the Registrar's webpage:

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

All requests for Academic Consideration must be made within 48 hours after the assessment date or submission deadline.

All Academic Consideration requests must include supporting documentation; however, recognizing that formal documentation may not be available in some extenuating circumstances, the policy allows students to make one Academic Consideration request **without supporting documentation** in this course. **However, the following assessments are excluded from this and, therefore, always require formal supporting documentation:**

- Final Exam scheduled during official examination period
- Midterm Exam

When a student mistakenly submits their one allowed Academic Consideration request **without supporting documentation** for the assessments listed above or those in the **Coursework with Assessment Flexibility** section below, the request cannot be recalled and reapplied. This privilege is forfeited.

Evaluation Scheme for Missed Assessments

If you need to miss any assessments in this course, with exception of 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 Quizzes:

Quizzes are assessments with built in flexibility. Quizzes are all delivered online via Brightspace. One quiz is due each Sunday at 11:00 pm EST and is delivered asynchronously on Brightspace, with a testing window from Thursday through Sunday. Students may choose any time within this window to complete and submit the quiz.

To account for missed quizzes, a 10% bonus is applied to the overall quiz grade at the end of the term, to a maximum of 100%. Because this flexibility is built in, Academic Consideration in the form of deadline extensions, grade reweighting, or make up quizzes is not permitted and the instructor will deny academic consideration requests. There are no make up quizzes. Missed quizzes receive a grade of zero, which is offset by the end of term bonus regardless of the reason for the absence.

Missed Skill Development Sessions (Labs):

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 can be applied to request academic consideration for skills.**

See URL link below for the student absence portal:

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

Once you submit an Academic Consideration request, you will receive an automated email confirming whether the request has been approved or denied. If approved, the email will include information about a make-up lab date. Even with academic consideration (undocumented absence), you will have to attend an alternate make-up session within the 2 weeks of the module. Check the portal and attend the makeup session on the assigned alternate date.

If you have questions or concerns, contact the Skill Development Coordinator, Ms. Winona Gadapati, at wgadapa2@uwo.ca within 48 hours of the Skill Development session you missed or will be missing.

Please note that if you miss any Skill Development session during the term, you will NOT be eligible for any potential bonus Skill Development grades offered at the end of the term. Eligibility for any bonus requires attendance at all Skill Development sessions.

IMPORTANT: Missing more than 1 Skill Development session in Biology 1002B will result in a failure of the Skill Development component, as you may not miss more than 1 session to pass.

Missed Midterm:

There is 1 Midterm Exam in this course worth 33% of the overall course grade. The midterm will take place in March. Students who miss the midterm without approved academic consideration will receive a grade of 0.

A make-up midterm exam is available only to students who have been granted academic consideration to miss the originally scheduled midterm. The make-up midterm is not a rewrite. Students who write the originally scheduled midterm are not permitted to write the make-up midterm. If you believe you will be unable to write the midterm, you must submit an Academic Consideration request through the Student Absence Portal before the exam. Once the midterm has been written, exemption or grade reweighting is not permitted.

If you miss the make-up midterm, you must obtain a 2nd approved Academic Consideration request to be excused. If both the regular midterm and the make-up midterm are missed with approved academic consideration, the weight of the midterm will be transferred to the Final Exam.

Submission of an Academic Consideration request through the Student Absence Portal is mandatory. Undocumented absences are not accepted, and failure to obtain approved academic consideration will result in a grade of 0 on the midterm.

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.

Missed Final Examination:

There is 1 Final Exam in this course worth 35% of the overall course grade. The final exam will take place in April. Students who miss the final exam without approved academic consideration will receive a grade of 0.

A make-up final exam is available only to students who have been granted academic consideration to miss the originally scheduled final exam. The make-up final is not a rewrite. Students who write the originally scheduled final exam are not permitted to write the make-up final. If you believe you will be unable to write the final exam, you must submit an Academic Consideration request through the Student Absence Portal within 48 hours of the exam. Once the final exam has been written, exemption or grade reweighting is not permitted.

If you miss the make-up final exam, you must obtain a 2nd approved Academic Consideration request to be excused. If both the regular final exam and the make-up final exam are missed with approved academic consideration, a grade of SPC will be assigned. Students with an SPC will have the opportunity to write the final exam during the next offering of the course, at which time the SPC will be replaced with a numerical grade.

Submission of an Academic Consideration request through the Student Absence Portal is mandatory. Undocumented absences are not accepted, and failure to obtain approved academic consideration will result in a grade of 0 on the final exam.

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. Additional Statements

6.1 Religious Accommodation

When a recognized religious holiday or observance conflicts with an examination, test, or other scheduled academic obligation, students must request accommodation via the University's Student Absence Portal (SAP). This request should identify the conflict and specify which course component(s) (e.g. test, midterm, exam) are affected.

Students are encouraged to submit the SAP request as early as possible, but no later than two weeks before any examination, or one week before any mid-term test or quiz, to allow sufficient time for adjustment.

The SAP request serves as official notification to both the course instructor and the Academic Advising Office, in accordance with University policy:

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

The Faculty of Science considers religious accommodations as scheduling conflicts. Instructors should provide either a make-up exam or an earlier sitting of the same exam to accommodate the student.

For more information on recognized religious holidays, please visit the Diversity Calendar posted on the Equity, Diversity & Inclusion website - <https://www.edi.uwo.ca>

6.2 Academic 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

6.3 General Academic Policies

The website for Registrar Services is <https://www.registrar.uwo.ca/>.

Use of @uwo.ca email: 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 email address. It is the responsibility of the account holder to ensure that emails received from the University at their official university address are attended to in a timely manner.

Requests for Relief (formally known as “appeals”)

Policy on Request for Relief from Academic Decision:

https://uwo.ca/univsec//pdf/academic_policies/appeals/requests_for_relief_from_academic_decisions.pdf

Procedures on Request for Relief from Academic Decision (Undergraduate):

https://uwo.ca/univsec//pdf/academic_policies/appeals/undergrad_requests_for_relief_procedure.pdf

6.4 Scholastic Offences

Policy on Scholastic Offences:

https://uwo.ca/univsec//pdf/academic_policies/appeals/scholastic_offences.pdf

Procedures on Scholastic Offences (Undergraduate):

https://uwo.ca/univsec//pdf/academic_policies/appeals/undergrad_scholastic_offence_procedure.pdf

Use of Electronic Devices During Assessments

In courses offered by the Faculty of Science, the possession of unauthorized electronic devices during any in-person assessment (such as tests, midterms, and final examinations) is strictly prohibited. This includes, but is not limited to: mobile phones, smart watches, smart glasses, and wireless earbuds or headphones.

Unless explicitly stated otherwise in advance by the instructor, the presence of any such device at your desk, on your person, or within reach during an assessment will be treated as a *scholastic offence*, even if the device is not in use.

Only devices expressly permitted by the instructor (e.g., non-programmable calculators) may be brought into the assessment room. It is your responsibility to review and comply with these expectations.

Use of Generative AI Tools

Unless otherwise stated, the use of generative AI tools (e.g., ChatGPT, Microsoft Copilot, Google Gemini, or similar platforms) is **not permitted** in the completion of any course assessments, including but not limited to: assignments, lab reports, presentations, tests, and final examinations.

Using such tools for content generation, code writing, problem solving, translation, or summarization—when not explicitly allowed—will be treated as a **scholastic offence**.

If the use of generative AI is permitted for a particular assessment, the conditions of use will be specified by the instructor in advance. If no such permission is granted, students must assume that use is prohibited. It is your responsibility to seek clarification before using any AI tools in academic work.

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 are used during lectures as a participation and learning tool, not for grades or evaluation. Questions are asked in real time to help students check their understanding, engage with the material, and apply concepts discussed in lecture or assigned in advance. Responses provide immediate, anonymous feedback to both students and the instructor, allowing the instructor to adjust the pace and focus of the lecture based on areas of difficulty or misunderstanding.

6.5 Support Services

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

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 (GBSV) and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced GBSV (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.

Learning-skills counsellors at Learning Development and Success (<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.

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