

First Nations University of Canada  
Fall 2025

**BIOLOGY 100: From Cells to Organisms S01/S02**

**Start and End Dates:** September 2<sup>nd</sup> to December 5<sup>th</sup>, 2025

**Instructor:** Dr. Fidji Gendron

**Email:** Please use the UR Courses email. Do not use the messaging system in UR Courses and do not use my work email. I like to keep all your emails together in UR Courses. I check emails from 9 am to 4 pm on workdays. I do not check emails on weekends and holidays.

**Office Hours:** Tuesday 11 am – 12 pm in room 3029 at the FNUniv. You can also reach me during my office hours using this Zoom link: <https://uregina-ca.zoom.us/j/9079819714>

**Mode of delivery:** on-site

**Lecture Schedule:** Tuesdays and Thursdays, 8:30 am – 9:45 am

**Lecture location:** Room 2002 in the FNUniv building.

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**Land Acknowledgement**

The First Nations University of Canada is situated on Treaty 4 and Treaty 6 Territories, the original lands of the Cree, Dene, Saulteaux, Blackfoot, Dakota, Lakota, Nakoda, and homeland of the Métis Nation.

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**Course Description**

This course will provide an examination of biological molecules, cell structure, fundamental cellular processes, bioenergetics, genetics, evolution, and animal and plant physiology. Biology 30 and Chemistry 30 are strongly recommended. This course is designed for biology majors, pre-professional students, secondary education science students, and those wanting two semesters of biology. Students seeking a single semester introductory course are advised to take Biology 140 or 150.

**Textbook:** A free open-access textbook is recommended for this course. You can access it using the following link: <https://openstax.org/details/books/biology-2e>

**Lab Resource:** Accessed via the BIOL 100 Lab UR Courses site. This is a separate UR Courses site than the lectures page. You will have to check both sites. Talk to the lab instructor about this.

**Evaluation**

Assessments	Weight %	Due Dates
Exam 1	17	October 2
Exam 2	17	November 6
Labs	30	See lab schedule
Final Exam	36	December 9, 9 am – 12 pm

- Exams have 3 parts: multiple choice questions, fill in the blanks and longer answers. You will have the whole lecture to write them. Exams are closed-book exams. Dictionaries (paper or electronic) are not allowed to be used during exams. There are no exceptions to this rule. Cell phones must be turned off and be out of sight during exams.
- The final exam covers the entire course.

### Lecture Schedule

I strongly recommend that you read the relevant information from the appropriate chapters before coming to class because this will prepare you for lectures. For some of the topics, the text provides much greater detail than the lectures. You are responsible for understanding the material at the level of detail provided in the lectures.

Week	Topic	Chapters in open-access textbook	Notes
September 2-5	Science of Biology, Chemical Foundation of Life	1, 2	
September 8-12	Science of Biology, Chemical Foundation of Life	1, 2	
September 15-19	Water, Carbon, Macromolecules	2, 3	
September 22-26	Cell Structure and Function, Membranes	4, 5	
September 29 – October 3	Metabolism	6	Exam 1 – October 2 Tuesday September 30: Truth & Reconciliation Day – no classes
October 6-10	Cellular Respiration	7	
October 14-17	Photosynthesis	8	
October 20-24	Cell Division: Mitosis and Meiosis, DNA	10, 11, 14	
October 27-31	From Gene to Protein	14, 15, 16	
November 3-7	Chromosomes and Heredity	12, 13	Exam 2 – November 6
November 10-14	<b>Reading Week: no classes</b>		
November 17-21	Evolution and the Origin of Species, Evolution of Populations, Animal Structure and Function	18, 19, 20, 33	
November 24-28	Circulation	40	
December 1-5	Gas Exchange	39	End of classes on December 5 <sup>th</sup>
<b>Final Examination</b> The final exam is comprehensive and covers the entire course.		<b>Exam Day: Tuesday December 9<sup>th</sup></b> <b>Exam Time: 9 am – 12 pm</b>	

## Laboratory Schedule

**Lab Instructor:** Jeff Racette

**Lab Location:** Room 2065 of FNUniv building

**Lab Schedule:**

- Section S05: Tuesday 11:30 am – 2:15 pm
- Section S03: Friday 8:30 pm – 11:15 am
- Section S04: Friday 11:30 am – 2:15 pm

Title	Labs Dates	Your Lab (date and time):
Lab 1: Macromolecules	September 16 and 19	
Lab 2: Diffusion and Osmosis	October 7 and 10	
Lab 3: Cellular Metabolism	October 14 and 17	
Lab 4: Cellular Reproduction	October 28 and 31	
Lab 5: Evolution	November 18 and 21	
Make-Up Lab Week/Review	November 25 and 28	
Lab Final	December 2 and 5	

**Lab attendance is mandatory** and will be recorded. If you miss a lab, you must contact the Lab Instructor via the lab UR Courses site within 48 hours of the missed lab. Travel plans or holidays are not a valid excuse for missing your lab session.

Mark Breakdown: The lab is worth 30% of your total class grade.

The lab instructor will share important information with you about the lab sessions and lab policies.

## Course Policies

1. Attendance at lectures is expected and necessary to do well in the course. All lectures will be done in person during the scheduled lecture times. I will record attendance.
2. The lectures will not be recorded due to student privacy concerns and you may not record any portion of a lecture (in either audio or visual formats) without the prior and explicit written permission of the instructors.
3. Important information will be sent using the UR Courses email. It is your responsibility to ensure you read these emails.
4. Attendance at all labs and completion of the lab assignments and exam are necessary.
5. All exams are closed-book exams. Dictionaries (paper or electronic) are not allowed to be used during exams. There are no exceptions to this rule. Cell phones must be turned off and be out of sight during exams.
6. Make up exams are given only for Exams 1 and 2 when the reason for missing the exam is well documented (a written medical documentation) and unavoidable.
7. The final exam cannot be written on any other day than that which is specified in the University of Regina timetable. Students who are unable to write their final exam must notify their course instructor or their faculty, federated college, or academic unit. Students must submit an Application for Deferral of Course Work and/or Final Exam including supporting documentation within three business days of the scheduled final exam date.
8. Exams 1 and 2, the lab exam, and the final exam must be completed in order to receive a mark for this class. If any one of these is not completed, a grade of NP (Not Passed) will be given.
9. The grading scheme for each assessment is the same for all students in the course. There is no opportunity to boost a grade by doing “extra work”, and grade allocations to the various assessment components will not be adjusted.
10. Assignments received after the due date will be penalized 10% per day, unless otherwise specified.
11. Biology 100 falls under the Academic Regulations of the University of Regina and the Faculty of Science.
12. UR courses webpage email is the primary method of communication to the instructors. Please keep email correspondence professional. No slang or jargon.
13. Lecture notes are provided for this course. However, the lecture notes mostly have diagrams with some keywords. Students are responsible to attend lectures and write their lecture notes to do well in this course.

## Student Information

### University of Regina 2025 – 2026 Undergraduate Calendar

(<https://www.uregina.ca/registrar/assets/docs/pdf/calendar/2025-2026.pdf>)

## Registration

Students must register for this course through the standard First Nations University of Canada registration procedure. Students who are not properly registered will not receive credit for the course even if they attend every lecture and complete the course requirements.

## Student Responsibilities and Course Prerequisites

Students are responsible for understanding and following the academic regulations outlined in the University of Regina Undergraduate Calendar. Your first responsibility is to ensure that you have the necessary prerequisite for this class. If you take a class without the prerequisite, you will not receive credit for it at graduation time, and you may have difficulty in completing your degree program.

## Attendance

Regular and punctual attendance at classes provides a foundation for academic success and is expected of all students. When the persistent lateness or absence of a student jeopardizes the learning or the evaluation of the work of other students in the course, the student may be subject to penalty such as being barred from writing the final exam. One written warning will be provided to the student before action is taken.

## Procedures and Dates for Dropping Courses

All changes to course registration must be made in writing to your Faculty or College. Students who are not attending but have not formally withdrawn are still considered to be registered, are liable for fees, and are assigned a failing grade of **NP** for failing to complete the course. Non-attendance does not constitute withdrawal. There are deadlines to withdraw from courses. You may drop courses using the UR Self-Service site. For important dates, look on page 1 in the most recent University of Regina Undergraduate Calendar.

## Academic Misconduct

Academic integrity requires students to be honest and responsible in all learning environments. Academic assignments exist to help students learn; grades exist to show how fully this goal is attained. Therefore, all work and all grades should result from a student's own understanding and effort. The principles of Academic Integrity include, but are not limited to:

- Completing your own work.
- Documenting your research and citing the works of others.
- Acting ethically and with integrity as you pursue your academic studies.
- Upholding the ethical or professional code of the profession for which you are preparing.
- Being accountable and taking responsibility for your actions.
- Learning from your mistakes.

## Cheating on Tests or Examinations

Cheating constitutes academic misconduct. Cheating is dishonest behaviour or the attempt to behave dishonestly. It includes, but is not limited to:

- using books, notes, diagrams, electronic devices, smart devices, or any other aids during an examination, either in the examination room itself or when permitted to leave temporarily unless explicitly authorized by the course instructor or examiner;
- copying the work of other students;
- communicating with others during an examination to give or receive information, either in the examination room or outside it or through the use of electronic communication devices;
- consulting others on a take-home examination unless authorized by the course instructor;
- commissioning or allowing another person to write an examination on one's behalf;
- not following the rules of an examination;

- using for personal advantage, or communicating to other students, advance knowledge of the content of an examination;
- altering answers on an assignment or examination that has been returned;
- removing an exam or exam related materials from the examination room if not permitted to do so.

### **Plagiarism**

Plagiarism is a form of academic misconduct where the work of another person is submitted without acknowledgement, whether from intent to deceive, lack of understanding, or carelessness. It is expected that students will examine and refer to the ideas of others unless the course instructor states otherwise. These ideas must be incorporated into the student's own analysis and must be clearly acknowledged through citations, footnotes, endnotes, or other practices accepted by the academic community. Students' use of others' expression of ideas, whether quoted verbatim or paraphrased, must also be clearly acknowledged according to acceptable academic practice. It is the responsibility of each student to learn what constitutes acceptable academic practice in each class. Plagiarism includes, but is not limited to, the following practices:

- not acknowledging an author or other source for one or more phrases, sentences, thoughts, code, formulae, or arguments incorporated in written work, software, or other assignments;
- presenting passages and/or portions of another person's paper, report, piece of software, etc., as an assignment for credit, even if that paper or other work is cited as a source in the accompanying bibliography or list of references. This includes copying sources of information found on the Internet; and
- paraphrasing text while maintaining the basic paragraph and sentence structure.

### **Other Forms of Academic Misconduct**

In addition to the matters described above, academic misconduct subject to discipline also includes, but is not limited to, the following:

- copying the work of others;
- falsifying lab results;
- adding entries to a bibliography with works not read or used;
- enabling another student in an act of academic dishonesty; for example, writing a test or paper for someone else, or preparing materials for another student's studio project;
- using the intellectual property of others for distribution, sale or profit without the authorization of the owner of that property. This includes providing the presentation materials, assignments or exam materials used in a class to course-sharing or note-sharing websites such as Course Hero, OneClass, StuDocu etc. without the authorization of the owner of those materials;
- providing false information to obtain a deferral of course work or examination;
- using a fictitious name and/or ID number on an examination;
- obtaining or attempting to obtain an academic advantage by non-academic means such as bribes or threats;
- theft of another student's notes;
- alteration or destruction of the work of other students;
- behaviour that interferes with the evaluation of another student's work, such as failure to participate in a group project;

- submitting the same work for credit in more than one course. Students who wish to submit work they have prepared for another course must consult the current course instructor(s) and receive permission to do so;
- working jointly, with another student or group of students, on an assignment that is to be graded if no explicit instructions are given by the instructor about group work. Students who wish to work together must request the instructor's permission in advance.

In this course, our primary focus is to cultivate an equitable, inclusive, and accessible learning community that emphasizes individual critical thinking and problem-solving skills. To ensure a fair and consistent learning experience for all students, the use of advanced AI tools such as ChatGPT, Grammarly, Quillbot, or Microsoft Copilot is strictly prohibited for all submitted academic (written/coding/creative/etc.) work, assignments, and assessments in this course. Each student is expected to complete all tasks without substantive assistance from others, including AI tools. Any use of AI tool in your academic work may result in academic misconduct and will be reported to an investigating Dean.

Consequences of academic misconduct are also outlined in the Undergraduate Calendar, as are the processes for dealing with misconduct. One important point about plagiarism that many students don't think about is that it is possible to plagiarize yourself (several scientists have recently found out that self-plagiarism is possible). If a student is taking a course for the second time, it is not acceptable to re-submit work that was done in the first attempt; that means that all work submitted in this course must be new and original whether or not a student has previously taken the course. If you are unclear at all about this discussion of cheating and plagiarism, please come see me. I would rather explain this several times (or 100 times) than deal with one case of cheating.

### **Non-Academic Misconduct**

Maintaining respectful, responsible, and professional is a requirement for everyone in the University community. Acts of non-academic misconduct include, but not limited to, disruption of instructional activities, assault of any nature, illegal drug use, and so on.

Any non-academic misconduct will be reported. An investigation and possible discipline will be followed afterwards.

### **Turnitin – A Tool**

As noted in the Regulations governing discipline for academic and non-academic misconduct in the Undergraduate Calendar, "plagiarism is a form of academic misconduct where the work of another person is submitted without acknowledgement, whether from intent to deceive, lack of understanding, or carelessness."

[Turnitin.com](https://www.turnitin.com) is a site that checks for possible plagiarism against databases of electronic books and articles, archived webpages, and previously submitted student papers. Turnitin produces an originality report for each student paper submitted. This report identifies matches between the student paper and any other sources in Turnitin's databases. The originality report is a tool for your instructor to use to detect potential plagiarism. The originality report itself does not establish whether the matches so identified are actually plagiarism. A low percentage of matches does not necessarily mean that the paper has not been plagiarized. Alternatively, a high percentage of matches might indicate many quotations, but these may be properly attributed.

Please note that it is at the course instructor's discretion to allow students to submit their paper to Turnitin in advance of the due date in order to receive the Turnitin originality feedback and then revise and resubmit.

The article below helps you to read and interpret a Turnitin report:

- [How to Read a Turnitin Originality Report \(chrome-extension://efaidnbmnnibpcajpcglclefindmkaj/https://www.uregina.ca/student/ssc/assets/docs/pdf/How-to-Read-a-Turnitin-Originality-Report.pdf\)](https://www.uregina.ca/student/ssc/assets/docs/pdf/How-to-Read-a-Turnitin-Originality-Report.pdf)

The Turnitin integration within UR Courses has the student data privacy option enabled. This means all users appear as "Student User" within Turnitin.com. Your student name and email address are not sent to Turnitin from UR Courses. There is the technical possibility that personal information could be harvested by Turnitin if that information is included within your submission. If you wish to remain anonymous, do not include your full name and student ID#, instead providing only your first name, last initial or only your student ID#. Also take similar care when naming your files to ensure that personal information is limited.

### **Specialized Accommodations**

Students in this course who, because of a disability, may have need for specialized accommodations, should please contact the Centre for Student Accessibility (Paskwaw Tower 119, 306 337-2200, [accessibility@uregina.ca](mailto:accessibility@uregina.ca)) and should also discuss these accommodations with their instructors. Please note that instructors do not have the authority to arrange for any accommodations independent of the Centre for Student Accessibility.

### **Deferral of Final Exam or Course Work**

The final exam cannot be written on any other day than that which is specified in the University of Regina timetable. Students who are unable to write their final exam must notify their course instructor or their faculty, federated college, or academic unit. Students must submit an Application for Deferral of Course Work and/or Final Exam including supporting documentation within three business days of the scheduled final exam date (Undergraduate Calendar, p. 59).

### **Mental Wellness**

If you are seeking support and resources on mental wellness, you may visit the Mental Wellness Hub website at: <https://www.uregina.ca/mental-wellness/>

Each campus also provides free counselling services. To book an appointment, please email [advising@firstnationsuniversity.ca](mailto:advising@firstnationsuniversity.ca) and put "counselling" in the subject line.

### **Grading System and Descriptions**

Source: page 61 of the Undergraduate Calendar

Percentage Grade	Description
90 - 100	<p>An outstanding performance with very strong evidence of:</p> <ul style="list-style-type: none"> <li>• an insightful and comprehensive grasp of the subject matter;</li> <li>• a clear ability to make sound and original critical evaluation of the material given;</li> <li>• outstanding capacity for original creative and/or logical thought;</li> </ul>

Percentage Grade	Description
	<ul style="list-style-type: none"> <li>an excellent ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts both in speech and in writing.</li> </ul>
80 – 89	<p>Very good performance with strong evidence of:</p> <ul style="list-style-type: none"> <li>a comprehensive grasp of the subject matter;</li> <li>an ability to make sound critical evaluation of the material given;</li> <li>a good capacity for original, creative, and/or logical thinking;</li> <li>a very good ability to organize, to analyze, to synthesize, to integrate ideas, and to express thoughts both in speech and in writing.</li> </ul>
70 – 79	<p>Above average performance with evidence of:</p> <ul style="list-style-type: none"> <li>a substantial knowledge of the subject matter;</li> <li>a good understanding of the relevant issues and a good familiarity with the relevant literature and techniques;</li> <li>some capacity for original, creative, and/or logical thinking;</li> <li>an above-average ability to organize, to analyze and to examine the subject material in a critical and constructive manner, and to express thoughts both in speech and in writing.</li> </ul>
60 – 69	<p>A generally satisfactory and intellectually adequate performance with evidence of:</p> <ul style="list-style-type: none"> <li>an acceptable basic grasp of the subject material;</li> <li>a fair understanding of the relevant issues;</li> <li>a general familiarity with the relevant literature and techniques;</li> <li>an ability to develop solutions to moderately difficult problems related to the subject material;</li> <li>a moderate ability to examine the material in a critical and analytical manner, and to express thoughts in writing.</li> </ul>
50 – 59	<p>A barely acceptable performance with evidence of:</p> <ul style="list-style-type: none"> <li>a familiarity with the subject material;</li> <li>some evidence that analytical skills have been developed;</li> <li>some understanding of relevant issues;</li> <li>some familiarity with the relevant literature and techniques;</li> <li>partially successful attempts to solve moderately difficult problems related to the subject material and to examine the material in a critical and analytical manner;</li> <li>basic competence in writing.</li> </ul>
0 - 49	Unacceptable performance.