



Department of Biology

COURSE SYLLABUS

COURSE TITLE: BIOL 90.3 Introduction to Biology	
COURSE CODE: 86943	TERM: Term 1 (Fall) 2023
COURSE CREDITS: Non degree-credit	DELIVERY: 5 contact hours per week
CLASS SECTION: 01 LECTURES/TUTORIALS LOCATION: Murray 95 MEETING TIMES: Tuesday 9:00 am to 11:20 am <u>AND</u> Thursday 9:00 am to 11:20 am WEBSITE: see Canvas	

COURSE DESCRIPTION

This course is designed as a preparatory access course for students who were unable to access, or need to review, 30-level biological science curricula. Content focuses on core concepts, terminology, problem solving strategies, and skills foundational to success in post-secondary biological sciences and related degree paths.

Prerequisite(s): Grade 12 Diploma or equivalent

Note: BIOL 90 fulfills prerequisite requirements for BIOL 120 and BIOL 121, though BIOL 90 is not directly equivalent to Biology 30. **BIOL 90 is a not-for-credit course and does not contribute to the course requirements for a university degree.**

COURSE OVERVIEW & STRUCTURE:

This BIOL 90 course consists of 5 hours of in-class time per week. It is uniquely structured, and encompasses a specific teaching methodology. Unlike traditional courses, the instruction methodology will be case-based and problem-solving oriented where the instructor will play a facilitating role. **It is a non-credit, non-degree level course, the completion of which is on a pass/fail basis.**

INSTRUCTOR

Dr. Malin Hansen E-mail: malin.hansen2020@gmail.com
Phone number: 639-384-4411

Office Hours: Please e-mail me to set up an appointment!

LAND ACKNOWLEDGEMENT

As we gather here today, we acknowledge that the Saskatoon campus of the University of Saskatchewan is on Treaty Six Territory and the Homeland of the Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship with one another. We recognize that in the course of your studies you will spend time learning in other traditional territories and Métis homelands. We wish you safe, productive and respectful encounters in these places.

LEARNING AND TEACHING CONTEXT

We are very excited to be offering this course in person this term. However, we realize that this is a time of transition for all of us. For some of you this will be the first time learning in person at the university and for others it will have been many months since you were here on campus. In addition, the past year and a half has been very difficult, with trauma, isolation and loss experienced by many in our communities. We recognize that this means that going back to school may be challenging for many of us. Please be mindful of each other, be patient and interact with empathy and care. The university has developed the guidelines below to help guide us through this term safely.

Important guidelines for this term:

During this term it is important that we undertake in-person elements of this class safely. In order to do this the university has developed a set of expectations and safety protocols that all students must adhere to if they are to engage in in-person activity.

Throughout the term:

➔ **Protect the pack:** Right now, the impact of student choices and activities when not on campus cannot be separated from time spent on campus. In order to “protect the pack”, the university is asking all students who are doing in-person work to be mindful and do whatever possible to lower the risk that you will contract COVID-19 and bring it onto campus.

➔ **Know what is required and expected of you:** One of the critical lessons learned in dealing with COVID-19 is knowing that situations can change and we must be flexible and ready to adjust our safety protocols. Instead of listing all of the relevant information in your course outline, the university has created [a webpage](#) where all up-to-date information around returning to campus is listed. **You are responsible** for **regularly** checking the health and safety guidelines <https://covid19.usask.ca/about/safety.php#Expectations> and knowing what is expected of you throughout the fall term.

➔ **Follow all guidance:** Students are expected to follow all guidance provided by the University’s Pandemic Recovery/Response Team (PRT), College/Department, professors, lab instructors, TAs, and any other staff member involved in the in-person academic program activities (e.g., Protective Services, Safety Resources).

➔ **Key channels of communication:** If there is a need for the class to pause meeting in-person for a period of time you will be notified. If this occurs, you will be provided with detailed information on what you will need to

do in place of the in-person class sessions (e.g., read content posted in Canvas, complete learning activities in Canvas).

All learning materials for this course will be posted in Canvas and class announcements/emails will also be sent out regularly. Please make sure to check your emails and Canvas several times a week!

COURSE THEMES

The course will facilitate student learning in the following themes:

- Physiology/Health
- Genetics/Cell biology
- Ecology/Environment
- Biodiversity/Evolution

LEARNING OUTCOMES

Upon successful completion of this course, students will have reliably demonstrated the ability to:

1. Analyze case studies within the contents of the course themes;
2. Find, learn and interpret problem-related concepts and incorporate new concepts in the analysis of the case studies;
3. Integrate multiple sources of information to gain a better understanding of the problem;
4. Clearly articulate the conceptual knowledge related to the problem/issue in the form of written and oral presentations;
5. Actively participate in class discussion and other collaborative tasks;
6. Demonstrate leadership roles and responsibilities.

Note: The University of Saskatchewan’s Learning Charter is intended to define aspirations about the learning experience that the University aims to provide, and the roles to be played in realizing these aspirations by students, instructors and the institution. A copy of the Learning Charter can be found at http://www.usask.ca/university_secretary/LearningCharter.pdf.

More information on University policies on course delivery, examinations and assessment of student learning can be found at: <http://policies.usask.ca/policies/academic-fairs/academiccourses.php>

DETAILED COURSE SCHEDULE

Week/ Dates	Topics and activities
Week 1 Sept 7	Thursday Sept 7 <ul style="list-style-type: none"> • Introductions • Telling our stories and getting to know each other • Introduction to BIOL 90 • Using CANVAS • Introduction to Biology/Science • Introduction to Poll Everywhere • Team building/Learning to work together

<p>Week 2 Sept 12 & 14</p>	<p>Tuesday Sept 12</p> <ul style="list-style-type: none"> • Introduction to plants and walk along the South Saskatchewan River. • Citing and referencing • Evaluation of information sources <p>Thursday Sept 14</p> <ul style="list-style-type: none"> • Tour of the greenhouse • Tour of the Biology Department
<p>Week 3 Sept 19 & 21</p>	<p>Tuesday Sept 19</p> <ul style="list-style-type: none"> • Introduction to the origin of life and evolution. • Introduction to protists and invertebrates. • Collection of water samples. • Study of protists and invertebrates. <p>Thursday Sept 21</p> <ul style="list-style-type: none"> • Introduction: Evolution of vertebrates. • Group work: Evolution of vertebrates (at the natural sciences museum). • Presentation: Evolution of vertebrates.
<p>Week 4 Sept 26 & 28</p>	<p>Tuesday Sept 26</p> <ul style="list-style-type: none"> • Presentation (cont.): Evolution of vertebrates. • Slides due: Evolution of vertebrates. • Introduction: Human evolution. • Group work: Human evolution. • Presentation: Human evolution. <p>Thursday Sept 28</p> <ul style="list-style-type: none"> • Quiz #1: Evolution of vertebrates (not including human evolution) • Group work (cont.): Human evolution. • Presentation (cont.): Human evolution. • Slides due: Human evolution
<p>Week 5 Oct 3 & 5</p>	<p>Tuesday Oct 3</p> <ul style="list-style-type: none"> • Introduction to the scientific method. • Discussion: What does it mean to be human? Clicker case, group work and videos. • Introduction of reflection essay. <p>Thursday Oct 5</p> <ul style="list-style-type: none"> • Quiz #2: Human evolution. • Introduction: Human migration. • Group work: Human migration. • Presentation: Human migration.

<p>Week 6 Oct 10 & 12</p>	<p>Tuesday Oct 10</p> <ul style="list-style-type: none"> • Group work (cont.): Human migration. • Presentation (cont.): Human migration. • Slides due: Human migration. • Introduction: Why did humans lose their fur? • Group work: Why did humans lose their fur? • Presentation: Why did humans lose their fur? <p>Thursday Oct 12</p> <ul style="list-style-type: none"> • Quiz #3: Human migration. • Presentation (cont.): Why did humans lose their fur? • Slides due: Why did humans lose their fur? • Introduction: Evolution of skin colour. • Group work: Evolution of skin colour. • Presentation: Evolution of skin colour.
<p>Week 7 Oct 17 & 19</p>	<p>Tuesday Oct 17</p> <ul style="list-style-type: none"> • Presentation (cont.): Evolution of skin colour. • Slides due: Evolution of skin colour. • Introduction: Evolution of speech and language. • Group work: Evolution of speech and language. • Presentation: Evolution of speech and language. • Reflective essay due <p>Thursday Oct 19</p> <ul style="list-style-type: none"> • Quiz #4: Evolution of skin colour. • Group work (cont.): Evolution of speech and language. • Presentation (cont.): Evolution of speech and language. • Slides due: Evolution of speech and language.
<p>Week 8 Oct 24 & 26</p>	<p>Tuesday Oct 24</p> <ul style="list-style-type: none"> • Introduction to DNA and genes. • Introduction: Sickle cell anemia. • Group work and case study: Sickle cell anemia. <p>Thursday Oct 26</p> <ul style="list-style-type: none"> • Quiz #5: Evolution of speech and language. • Group work and case study (cont.): Sickle cell anemia. • Discussion: Natural selection in humans.

<p>Week 9 Oct 31 & Nov 2</p>	<p>Tuesday Oct 31</p> <ul style="list-style-type: none"> • Introduction to scientific writing and plagiarism. • Introduction to scientific posters and poster presentations. • Selecting a research topic (group work). • Research topic (group work) <p>Thursday Nov 2</p> <ul style="list-style-type: none"> • Quiz #6: DNA, genes and sickle cell anemia. • Research topic (group work) • Designing posters • Printing of posters (if ready) • Poster presentations (if ready)
<p>Nov 6-10</p>	<p><i>Fall Break – No Classes</i></p>
<p>Week 10 Nov 14 & 16</p>	<p>Tuesday Nov 14</p> <ul style="list-style-type: none"> • Printing of posters • Poster presentations • Posters due. • Introduction to research paper project. • Selecting topic (individual work). <p>Thursday Nov 16</p> <ul style="list-style-type: none"> • Introduction to scientific writing and plagiarism. • Research topic (individual work)
<p>Week 11 Nov 21 & 23</p>	<p>Tuesday Nov 21</p> <ul style="list-style-type: none"> • Research topic (individual work) <p>Thursday Nov 23</p> <ul style="list-style-type: none"> • Presentation of research topic in sharing circle.
<p>Week 12 Nov 28 & 30</p>	<p>Tuesday Nov 28</p> <ul style="list-style-type: none"> • Research paper. <p>Thursday Nov 30</p> <ul style="list-style-type: none"> • TBD
<p>Week 13 Dec 5 & 7</p>	<p>Tuesday Dec 5</p> <ul style="list-style-type: none"> • Research paper due. <p>Thursday Dec 7</p> <ul style="list-style-type: none"> • Individual debrief with instructor

REQUIRED & SUPPLEMENTARY RESOURCES

No textbook is required. We will post readings and resources on Canvas.

COPYRIGHT

Course materials are provided to you based on your registration in a class, and anything created by your professors and instructors is their intellectual property and cannot be shared without written permission. If materials are designated as open education resources (with a creative commons license) you can share and/or use in alignment with the [CC license](#). This includes exams, PowerPoint/PDF slides and other course notes. Additionally, other copyright-protected materials created by textbook publishers and authors may be provided to you based on license terms and educational exceptions in the Canadian Copyright Act (see <http://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>).

Before you copy or distribute others' copyright-protected materials, please ensure that your use of the materials is covered under the University's Fair Dealing Copyright Guidelines available at <https://library.usask.ca/copyright/general-information/fair-dealing-guidelines.php>. For example, posting others' copyright-protected materials on the open web is not covered under the University's Fair Dealing Copyright Guidelines, and doing so requires permission from the copyright holder. For more information about copyright, please visit <https://library.usask.ca/copyright/index.php> where there is information for students available at <https://library.usask.ca/copyright/students/rights.php>, or contact the University's Copyright Coordinator at <mailto:copyright.coordinator@usask.ca> or 306-966-8817.

INTEGRITY DEFINED (FROM THE OFFICE OF THE UNIVERSITY SECRETARY)

The University of Saskatchewan is committed to the highest standards of academic integrity (<https://academic-integrity.usask.ca/>). Academic misconduct is a serious matter and can result in grade penalties, suspension, and expulsion.

Prepare for Integrity

Students are expected to act with academic integrity.

- Students are encouraged to complete the Academic Integrity Tutorial to understand the fundamental values of academic integrity and how to be a responsible scholar and member of the USask community (tutorial link: <https://libguides.usask.ca/AcademicIntegrityTutorial>).
- Students can access campus resources that support development of study skills, time and stress management, and ethical writing practices important for maintaining academic integrity and avoiding academic misconduct.

Responses to Misconduct

Students are expected to be familiar with the academic misconduct regulations (<https://governance.usask.ca/student-conduct-appeals/academic-misconduct.php#About>).

- Definitions appear in Section II of the academic misconduct regulations.
- The academic misconduct regulations apply regardless of type of assessment or presence of supervision during assessment completion.
- Students are advised to ask for clarification as to the specific expectations and rules for assessments in all of their courses.
- Students are urged to avoid any behaviour that could result in suspicions of cheating, plagiarism, misrepresentation of facts. Students should note that posting copyrighted course materials (e.g., notes, questions, assignments or exams) to third party websites or services or other forum or media without permission is an academic or non-academic misconduct offense.

Non-academic offenses are dealt with under the [Standard of Student Conduct in NonAcademic Matters and Regulations and Procedures for Resolution of Complaints and Appeals](#).

Examinations with Access and Equity Services (AES)

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Access and Equity Services (AES) if they have not already done so. Students who suspect they may have disabilities should contact AES for advice and referrals at any time. Those students who are registered with AES with mental health disabilities and who anticipate that they may have responses to certain course materials or topics, should discuss course content with their instructors prior to course add / drop dates. In order to access AES programs and supports, students must follow AES policy and procedures. For more information or advice, visit <https://students.usask.ca/health/centres/access-equity-services.php>, or contact AES at 306-966-7273 or aes@usask.ca.

Students registered with AES may request alternative arrangements for mid-term and final examinations. Students must arrange such accommodations through AES by the stated deadlines. Instructors shall provide the examinations for students who are being accommodated by the deadlines established by AES.

For information on AES services for Fall 2021 please visit:

<https://students.usask.ca/health/centres/access-equity-services.php#Fall2021Information>

STUDENT SUPPORTS

Academic Help for Students

The University Library offers a range of learning and academic support to assist USask undergrad and graduate students. For information on specific services, please see the Learning page on the Library web site <https://library.usask.ca/support/learning.php>.

Remote learning support information <https://students.usask.ca/remote-learning/index.php>

Class and study tips <https://students.usask.ca/remote-learning/class-and-study-tips.php>

Remote learning tutorial https://libguides.usask.ca/remote_learning

Study skills materials for online learning <https://libguides.usask.ca/studyskills>

A guide on netiquette, principles to guide respectful online learning interactions <https://teaching.usask.ca/remote-teaching/netiquette.php>

Teaching, Learning and Student Experience

Teaching, Learning and Student Experience (TLSE) provides developmental and support services and programs to students and the university community. For more information, see the students' web site <http://students.usask.ca>.

Financial Support

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact Student Central (<https://students.usask.ca/student-central.php>).

Aboriginal Students' Centre

The Aboriginal Students' Centre (ASC) is dedicated to supporting Aboriginal student academic and personal success. The centre offers personal, social, cultural and some academic supports to Métis, First Nations, and Inuit students. The centre is also dedicated to intercultural education, bringing Aboriginal and non-Aboriginal students together to learn from, with and about one another in a respectful, inclusive and safe environment. Students are encouraged to visit the ASC's Facebook page (<https://www.facebook.com/aboriginalstudentscentre/>) to learn more.

International Student and Study Abroad Centre

The International Student and Study Abroad Centre (ISSAC) supports student success and facilitates international education experiences at USask and abroad. ISSAC is here to assist all international

undergraduate, graduate, exchange and English as a Second Language students in their transition to the University of Saskatchewan and to life in Canada. ISSAC offers advising and support on matters that affect international students and their families and on matters related to studying abroad as University of Saskatchewan students. Please visit students.usask.ca for more information.

LEARNING ASSESSMENT

Overall assessment is designed to ensure students have attained the learning outcomes for the course. Credit for the course will be granted on a complete/incomplete basis. To successfully complete BIOL 90 the student should be able to **Meet Expectations** in each of the six categories below:

Assessment Item	Learning Outcome	Criteria to be met		
		Exceeds Expectations	Meets Expectations	Does not meet expectations
1. Reflection Essay	Communicating, integrating information, analyzing problems and issues	Prepares a well-constructed essay reflecting on the information conveyed in the lecture and how it integrates with the student's own experiences or prior knowledge.	Essay conveys some information gained from the lectures and attempts to relate it to the student's own experiences or prior knowledge.	Is not able to convey the lecture information accurately and/or place it in relation to the student's own knowledge and experience base.
2. Quizzes	Incorporating new concepts; Articulating conceptual knowledge	Completes all quizzes with an average of greater than 70%	Achieves an average of 60% on at least three post-case-study quizzes.	Completes less than three quizzes or obtains an average of less than 50% on the best three quizzes
3. Participation in group activities	Analyze problems; integrate sources of information; actively participate in collaborative tasks	Actively contributes to all case studies, playing an active role in group activities, including preparation of Case Study handouts, whole class discussion the Class Journal of Biological Terms	Actively participates in at least three case studies, contributing to group activities, including preparation of Case Study handouts, whole class discussion the Class Journal of Biological Terms	Does not participate in, or actively contribute to, at least three case studies.
4. Written reports and worksheets	Demonstrating leadership, integrating sources of information	Leads a jigsaw activity for all case studies and is able to routinely and accurately. conveying original group's findings. Allows others the opportunity to lead.	Leads a jigsaw discussion for at least three case studies, accurately conveying original group's findings.	Is unable to communicate original group's ideas in at least three jigsaw activities.
5. Slide presentations	Communicating, integrating information, analyzing problems and issues	Plays a leadership role in developing oral presentations. Presents findings more than once during the term.	Contributes to developing (at least three) case-related oral presentations. Presents at least once during the term.	Does not contribute to presentation research or present at least once during the term.

<p>6. Final paper: Individual study (i.e. take home exam) and follow-up discussion with instructor(s)</p>	<p>Identifying problems; incorporating new concepts; integrating multiple sources; articulating conceptual knowledge;</p>	<p>Student identifies the problem or issue from at least three course themes. Student presents a well-researched analysis from these themes and identifies commonalities or conflicts among them. Student draws from a range of information, documenting the findings. Student is able to discuss the issue from more than one perspective.</p>	<p>Student is able to work individually to analyze and identify the problem presented and present relevant concepts from the perspective of at least one of the course themes Student is able to convey ideas in both written and oral form (discussion or presentation). Analysis draws from more than one source of information, documenting these, integrated to gain a better understanding and communicate their ideas</p>	<p>Student is not able to provide a reasonable description of the problem or issue from the perspective of any of the themes of the course.</p>
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In the event that a student does not meet expectations in one of the first five categories (weekly quizzes, participation in group activities, jigsaw discussions, oral presentations, reflection essay) the student may pass the course if the instructor deems the relevant concepts are demonstrated to their satisfaction as part of the final exam/individual case study assignment.

If the student has not met expectations in more than one of the first five categories, but achieves a score of “Exceeds expectations” on the final paper, the student may still be given a passing grade.

Failure to demonstrate one or more of required learning outcomes will result in a grade of “incomplete”.