UNIVERSITY OF SASKATCHEWAN

Department of Biology

COURSE SYLLABUS

COURSE TITLE: **BIOL 90.3 Introduction to Biology**	
COURSE CODE: 86943	TERM: Term 1 (Fall) 2019-20
COURSE CREDITS: Non degree-credit	DELIVERY: 5 contact hours per week
CLASS SECTION: 01 LECTURES/TUTORIALS LOCATION: room 122 WPT Biology Teaching Wing MEETING TIMES: Wednesday 12:30 to 2:50 pm AND Thursday 9:00 am to 11:20 am WEBSITE: see PAWS/Blackboard	

Course Description

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 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	Major Activities
Week 1 **Sept 4 & 5**	**Session A (2.5 hours) Sept 4 Wed pm** • Course opening/introductions • Telling our stories • Overview of the course and its objectives • Taking our pictures **Session B (2.5 hours) Sept 5 Thurs am** • Overview of the course learning assessment • Using PAWS/Blackboard/other USask web resources • Citing and referencing • Preparing PowerPoint.ppt • Learning to work together
Week 2 **Sept 11 & 12**	**Session A (2.5 hours) Sept 11 Wed pm** • Learning tour about the Department of Biology and science library • Learning tour about the Museum of Natural Sciences University of Saskatchewan **Session B (2.5 hours) Sept 12 Thurs am** • Learning tour in nature • Answering questions of the walking guide natural sciences museum

Week 3 **Sept 18 & 19**	**Session A (2.5 hours) Sept 18 Wed pm** • Practice quiz • Introduction to genetics • Introductory case study **Session B (2.5 hours) Sept 19 Thurs am** • Finish group introductory case study work • Debrief about the case; instructions for the Reflection Essay • Distribution of next week's case study

Week/ Dates	**Major Activities**
Week 4 **Sept 25 & 26**	**Case Study #1** **Session A (2.5 hours) Sept 25 Wed pm** • Reflection Essay due this day (September 25) • Case scenario review; search for background knowledge • Case discussion (students & instructor) **Session B (2.5 hours) Sept 26 Thurs am** • Group discussion of research • Case Objectives Review/Completion of Handout Material • Jigsaw activity
Week 5 **Oct 2 & 3**	**Case Study #1** (continued) **Session C (2.5 hours) Oct 2 Wed pm** • Review of jigsaw activity results and case learning objectives • Build and finalize power-point presentations **Session D (2.5 hours) Oct 3 Thurs am** • Topic presentations; Q & A • Upload presentations and completed handouts to Blackboard • Distribution of next week's case study
Week 6 **Oct 9 & 10**	*Oct 9 - 15 minute quiz on the concepts learned from Case Study #1* **Case Study #2** **Session A (2.5 hours) Oct 9 Wed pm** • Case scenario review; search for background knowledge • Case discussion (students & instructor interaction) **Session B (2.5 hours) Oct 10 Thurs am** • Group discussion of research • Case Objectives Review/Completion of Handout Material • Jigsaw activity

Week 7 **Oct 16 & 17**	**Case Study #2** (continued) **Session C (2.5 hours) Oct 16 Wed pm** • Review of jigsaw activity results and case learning objectives • Build and finalize power-point presentation **Session D (2.5 hours) Oct 17 Thurs am** • Topics presentation; Q & A • Upload presentations and completed handouts to Blackboard • Distribution of next week's Case Study
Week 8 **Oct 23 & 24**	*Oct 23 - 15 minutes quiz on the concepts learned from Case Study # 2* **Case Study #3** **Session A (2.5 hours) Oct 23 Wed pm** • Case scenario review; search for background knowledge • Case discussion (students & instructor interaction) **Session B (2.5 hours) Oct 24 Thurs am** • Group discussion of research • Case Objectives Review/Completion of Handout Material • Jigsaw activity

Week/ Dates	**Major Activities**
Week 9 **Oct 30 & Oct 31**	**Case Study #3** (continued) **Session C (2.5 hours) Oct 30 Wed pm** • Review of jigsaw activity results and case learning objectives • Build and finalize power-point presentation **Session D (2.5 hours) Oct 31 Thurs am** • Topic presentations; Q & A • Upload presentations and completed handouts • Distribution of next week's Case Study
Week 10 **Nov 6 & 7**	*Nov 6 - 15 minute quiz on the concepts learned from Case Study #3* **Case Study #4** **Session A (2.5 hours) Nov 6 Wed pm** • Case scenario review; search for background knowledge • Case discussion (students & instructor interaction) **Session B (2.5 hours) Nov 7 Thurs am** • Group discussion of research • Case Objectives Review/Completion of Handout Material • Jigsaw activity
Nov 13 & 14	*Break Week – No Classes*

Week 11 **Nov 20 & 21**	**Case Study #4 (**continued) **Session C (2.5 hours) Nov 20 Wed pm** • Review of jigsaw activity results and case learning objectives • Build and finalize power-point presentation **Session D (2.5 hours) Nov 21 Thurs am** • Topics presentation; Q & A • Upload presentations and completed handouts
Week 12 **Nov 27 & 28**	*Nov 27 - 15 minute quiz on the concepts learned from Case Study #4* **Session A (2.5 hours) Nov 28 Wed pm** • Course Review **Session B (2.5 hours) Nov 29 Thurs pm** • Course Review (continued) • Take home the open-book Final Exam assignment
Week 13 **Dec 4 & 5**	*Dec 4 – Final Exam Answers to be handed in by 3:00 pm* **No other course activity scheduled for Dec 5** **Dec 5 –** individual debrief with instructors/assessment of course components 1 through 5.

Course Overview & Structure:

The Biol 90 course consists of up to 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.

The course involves 4 cases that will be described, discussed, analyzed and presented. Each case will be investigated over a two-week period as follows:

Case scenario review (Session A): Students will be seated in groups of 4 and will have access to the case in advance. Both the instructor and the students will go over the case in general during which students' reflections, questions, and inquires are facilitated.

Main Group work (Session A & B): Each group will investigate the case following one of the main course themes (Physiology/Health; Genetics/Cell Biology; Ecology/Environment; Biodiversity/Evolution). For each theme, a written handout with instructions for investigation of the case as well as related questions is provided to a group. The investigation of each topic requires the group to study related concepts, search multiple resources, explore and interpret findings, and reach a conclusion(s). During students' investigation, discussion and analysis, the instructor will rotate among the groups to facilitate the activity and support the groups. In subsequent cases, the groups are assigned a course theme different than the ones they were assigned in the previous case on a rotational basis.

Jigsaw activity (Session B & C): In the jigsaw activity, new groups will be formed with a different combination of students in each. Each of these new groups includes a representative(s) from one of the original groups. The representative(s) will be responsible for teaching the rest of the group members the theme that was investigated in his/her original group.

PowerPoint presentations (Session C): Each group prepares a PowerPoint presentation using their research findings to summarize the relevant case-learning objectives. The group then nominates one member to present the slides. Eventually, every student is expected to present a research finding objective at one point throughout the course.

Case wrap-up (Session D): All students and the instructor will convene as one group for the students to present their case summaries. Each presentation will approximate15-minutes in duration with extra time allowed for questions and answers. Student presentations and completed handouts from the group work must be uploaded to Blackboard for the rest of the class to review. The group discussion should address all case learning objectives, summarize, reflect and combine the conclusions from the four course themes. The next case will be introduced at the end of the wrap-up

Instructor:

Dr. Manar Angrini Office location: room 220.2 WPT CSRB addition phone: 306-966-4437 email: manar.angrini@usask.ca

Office Hours: Generally speaking, the instructor will be available in her office on a drop-in basis. Specific appointments can be set by email or over the phone.

Required & Supplementary Resources

Textbook: No textbook required

Facilities Needed: web connected workstations and individual devices; projector system; tables that can be arranged to facilitate small group work and interaction. Resource material: a selection of textbooks; other printed resources; exhibit material as appropriate (e.g. microscopes and slides, living or preserved specimens).

Land Acknowledgement

As we gather here today, we acknowledge we are 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.

Integrity Defined (from the Office of the University Secretary)

The University of Saskatchewan is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Conduct & Appeals section of the University Secretary Website and avoid any behavior that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University. For more information on what academic integrity means for students see the Student Conduct & Appeals section of the University Secretary Website at: http://www.usask.ca/secretariat/index.php. All students should also read and be familiar with the Regulations on Academic Student Misconduct as well as the Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals available on the University Secretary Website.

Student Supports Student Learning Services

Student Learning Services (SLS) offers assistance to U of S undergrad and graduate students. For information on specific services, please see the SLS web site http://library.usask.ca/studentlearning/.

Student and Enrolment Services Division

The Student and Enrolment Services Division (SESD) focuses on providing 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 center offers personal, social, cultural and some academic supports to Métis, First Nations, and Inuit students. The center is also dedicated to intercultural education, brining 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 in their international education experiences at the U of S and abroad. ISSAC is here to assist all international undergraduate, graduate, exchange and English as a Second Language students and their families in their transition to the U of S and Saskatoon. ISSAC offers advising and support on all matters that affect international students and their families and on all matters related to studying abroad. Please visit students.usask.ca for more information.

College Supports

Students in Arts & Science are encouraged to contact the Undergraduate Student Office and/or the Trish Monture Centre for Success with any questions on how to choose a major; understand program requirements; choose courses; develop strategies to improve grades; understand university policies and procedures; overcome personal barriers; initiate pre-career inquiries; and identify career planning resources. Contact information is available at: http://artsandscience.usask.ca/undergraduate/advising/

Examinations through Access and Equity Services (AES)

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with AES if they have not already done so. Students who suspect they may have disabilities should contact AES for advice and referrals. In order to access AES programs and supports, students must follow AES policy and procedures. For more information, check https://students.usask.ca/health/centres/access-equity-services.php or contact AES at 9667273 or aes@usask.ca.

Students who are in need of accommodation for the course must present the appropriate letter from AES to the course coordinator. Students registered with AES may require alternative arrangements for examinations. Students must arrange such accommodations through AES by their stated deadlines.

Recording of the Course

Students are not allowed to record the lectures in this course, except with the permission of the instructors or as provided for by arrangements with Access and Equity Services. Any recording made under these provisions are to only be used for the personal learning of the student who made the recording.

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, unless materials are designated as open education resources. 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-dealingguidelines.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.

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. Jigsaw Discussions	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. Oral 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.
6. Final Exam/Case study. Individual study (i.e. take home exam) and follow-up	Identifying problems; incorporating new concepts; integrating multiple sources;	Student identifies the problem or issue from at least three course themes. Student presents a well-researched analysis from these	Student is able to work individually to analyze and identify the problem presented and present relevant	Student is not able to provide a reasonable description of the problem or issue from the

discussion with instructor(s)	articulating conceptual knowledge;	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	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	perspective of any of the themes of the course.

In the event that a student does not meet expectations in <u>one</u> 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 <u>more than one</u> of the first five categories, but achieves a score of “Exceeds expectations” on the final exam/individual case study, 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”.