

## COURSE SYLLABUS

COURSE TITLE:	BIOL 121 The Diversity of Life	TERM:	Q4 Spring and Summer 2015
COURSE CODE:	61132	DELIVERY:	Lecture & Practicum (Lab)
COURSE CREDITS:	3.0	START DATE:	July 21 <sup>st</sup> , 2015
CLASS SECTION:	01	LAB LOCATION:	204 Biology Bldg
CLASS LOCATION:	155 Geology	LAB TIME:	1:30 am to 4:20 (MTWRF)
CLASS TIME:	8.30 to 10.50 am (MTWRF)	WEBSITE:	via Blackboard

### Course Description

This course is designed to introduce you to the vast and exciting field of biology, with a focus on biological diversity, evolution, adaptations of organisms to specific environments, and the evolutionary and ecological factors influencing changes in biodiversity over time and space.

Our world has at least 15 million species, all of which have adapted to particular environments and lifestyles and use energy to grow and reproduce. We examine these processes in representative organisms from all the major groups, and discuss factors influencing changes in biodiversity over time and space.

Prerequisite(s): Biology 30 or BIOL 107 or BIOL 108.

Note: Students with credit for BIOL 110 will not receive credit for BIOL 121.

### Learning Outcomes

By the completion of this course, students will be expected to:

1. have an understanding of biological principles (concepts), and that evolution is the unifying principle in biology
2. gain an appreciation for biology as an experimental science [hence, provide necessary background for advanced study of biology and other related disciplines], and realize that an understanding of biological principles requires knowledge of other fields of science (chemistry, physics, geology, geography, mathematics, biochemistry) and many disciplines within biology (e.g. evolution, ecology, genetics, physiology, structure and function, ethology, parasitology, molecular biology, etc.).
3. obtain knowledge of the diversity and complexity of life, which includes how organisms are adapted to their environment and the variation (e.g. morphological, genetic, physiological, behavioral) that exists among individuals of the same species and between individuals of related species
4. be able to think critically regarding scientific issues in our society and understand the importance of relationships between organisms and their environment, and how biodiversity is constantly changing over time

**Note:** The University of Saskatchewan 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](http://www.usask.ca/university_secretary/LearningCharter.pdf)

More information on the Academic Courses Policy on course delivery, examinations and assessment of student learning can be found at:

<http://policies.usask.ca/policies/academic-affairs/academic-courses.php>

## **Instructors**

### **Contact Information:**

Dr. Douglas Smith Instructor	room 150 Biology Bldg dh.smith@usask.ca	966-4415
Gillian Murza room Lab Coordinator	room 216 Biology Bldg gillian.murza@usask.ca	966-4423
Joel Yurach Lab Coordinator	room 216 Biology Bldg <a href="mailto:joel.yurach@usask.ca">joel.yurach@usask.ca</a>	966-4423

## **INSTRUCTIONAL RESOURCES: TEXTBOOK AND LAB MANUAL**

The recommended textbook for Biology 121.3 is Biology - Exploring the Diversity of Life (2<sup>nd</sup> Canadian Edition) by Russell et al., Nelson Education Ltd., 2013.

The textbook will be referred to regularly during lectures both in terms of content and for the use of visual aids. It may also be helpful for reviewing the material. You will not need to bring your textbook to class.

Copies of the textbook will be available from the reserve desk in the Science Library, for short term, in library use. The lectures are intended to highlight and reinforce key concepts. Please see the Learning Objectives Summary, which will be posted on Blackboard with this outline for a more detailed description of the topics you will be responsible for on the midterm and final exam.

The Lab Manual for Biology 121.3 (2014-15 Edition) is required for the course, and must be brought to each lab session. It is available for purchase from the U of S Bookstore.

## **Downloads**

Partial class notes will be posted throughout the course on Blackboard. You should download the new notes once they are posted and then bring them to lecture. This "Class Syllabus" posted on Blackboard should be downloaded and read ahead of time.

Those students who purchase a copy of the textbook (including the electronic version) will have access to MindTap. MindTap is an online platform that provides access to a digital copy of the textbook, animations, and self-tests.

## **Laboratory Information:**

1. Labs begin on Wednesday, July 22<sup>nd</sup>, 2015. Students are expected to attend and be on time for all scheduled labs, review labs and final lab exams. The lab schedule is provided on the last page of this document.

2. **The current edition of the Biology 121.3 lab manual is required for all labs** (this item can be purchased for at the Bookstore in Marquis Hall). For your labs you will also need a 3-ring binder; a 2H, 3H or 4H drawing pencil, white (unlined) drawing paper, a calculator, an eraser, and a metric ruler (all available from the Tuck Shop or North 40 shop on campus).
3. Any other questions regarding the lab should be directed to the laboratory staff in Room 216. See page 2 of the lab manual for contact telephone numbers.

## Attendance Expectations for Laboratory Classes

Students are expected to attend all scheduled lab periods. Students are advised to consult the lab manual for further information about BIOL 121 procedures to follow when they are too ill to attend the lab period (and/or lab exam) or are facing extenuating personal circumstances.

## Grading Scheme

Midterm exam	15
Final exam	45
Lab Assignments & quizzes	20
Lab exam	20
Total	100%

## Evaluation Components

### Midterm Lecture Exam:

**Value:** 15% of final course grade  
**Date:** July 30<sup>th</sup>, 2015 (to be written during the lecture period)  
**Length:** 40 minutes  
**Format:** 40 multiple-choice questions; machine marked  
**Description:** Based on lecture material prior to July 30<sup>th</sup>. Use of calculators and all other electronic devices is not allowed.

### Final Lecture Exam:

**Value:** 45% of final course grade  
**Date:** To Be Announced; Q4 exams written between August 12<sup>th</sup> -14<sup>th</sup>, 2015  
**Length:** 3 hours  
**Format:** 100 multiple-choice questions; machine marked  
**Description:** The exam is comprehensive in that it will cover all lecture material. However, material delivered after the midterm exam will be emphasized. Calculators, phones and all other electronic devices are not allowed.

### Laboratory Assignments & Quizzes:

**Value:** 20% of final course grade  
**Date:** see Laboratory Schedule  
**Format:** Quizzes (written); spot tests; flower project. Spot tests involve images shown in PowerPoint and short questions about the specimen shown. No phones, calculators or electronic devices are to be used during exams. Additional

information about the lab quizzes is found in your lab manual, and will be given in the weeks prior to the assignment.

### Final Laboratory Exam:

- Value:** 20% of final course grade  
**Date:** August 8<sup>th</sup> (during the lab session)  
**Length:** 1.5 hours  
**Format:** This will be a mixture of spot test, short written answers and practical questions (slide prep, etc.)  
**Description:** The exam is comprehensive in that it will cover all laboratory classes. Calculators and all other electronic devices are not allowed.

### Scheduling of Exams

Students must bring their current University of Saskatchewan student card to all exams and be prepared to present it for verification purposes. Entry into certain campus buildings where exams may be held, also requires a valid student card.

It is forbidden for students to utilize in any way during an exam, any electronic device (e.g., cell phone, dictionary, palm pilot, translator, etc.). This includes calculators because these are not required for any exam.

Midterm and final examinations, and the lab exam, must be written on the date scheduled. Final examinations may be scheduled at any time during the examination period in August 12-14 2015; students should therefore avoid making prior travel, employment, or other commitments for this period.

In the event that a student is absent from the **midterm exam** through no fault of his/her own due to a medical emergency, death in the family, or other valid reasons, documentation must be provided explaining the absence, to assist in the determination of whether permission will be granted for the student to write a deferred mid-term exam. Students absent for the Mid-Term Lecture Exam **must advise their Instructor in person or by telephone (not by email) and initiate arrangements for writing a Deferred Mid-Term Exam, within 2 working days of the missed exam**, in order to avoid being assigned a grade of zero for the exam.

If a student is absent from the **final exam** through no fault of his or her own for medical or any other valid reason, **he/she must apply to the Dean's Office of the College in which he/she is registered for an opportunity to write a Deferred Final Exam, within 3 working days of the missed exam**. Documentation must also be provided to explain the absence from the final exam. Deferred exams may utilize a different format than the regular exam, at the sole discretion of the instructors.

Consult page 2 of the 2014-2015 Lab Manual for the procedure to follow for a missed Lab Exams and Quizzes.

Students are encouraged to review all examination policies and procedures:  
<http://policies.usask.ca/policies/academic-affairs/academic-courses.php>

## **Student Feedback**

Marks from machine-graded exams are usually available within one week. The multiple-choice questions will not be posted after the exam. Students will be encouraged to meet with the instructor to review their performance.

## **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.

All students should read and be familiar with the Regulations on Academic Student Misconduct <http://www.usask.ca/secretariat/student-conduct-appeals/academic-misconduct.php> as well as the Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals

<http://www.usask.ca/secretariat/student-conduct-appeals/non-academic-misconduct.php>

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/university\\_secretary/pdf/dishonesty\\_info\\_sheet.pdf](http://www.usask.ca/university_secretary/pdf/dishonesty_info_sheet.pdf)

***Important Note:*** Additional information about student misconduct specific to BIOL 121 is found in the laboratory manual. BIOL 121 students are required to read and understand the information about misconduct that is presented in the laboratory manual.

## **Examinations with Disability Services for Students (DSS)**

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Disability Services for Students (DSS) if they have not already done so. Students who suspect they may have disabilities should contact DSS for advice and referrals. In order to access DSS programs and supports, students must follow DSS policy and procedures. For more information, check <http://www.students.usask.ca/disability/>, or contact DSS at 966-7273 or [dss@usask.ca](mailto:dss@usask.ca).

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

## Lecture And Laboratory Schedule

DAY	MAJOR LECTURE TOPICS	LAB TOPIC (see lab manual for details)
1 Tues. July 21	Course Introduction Living & Non-living Entities	NO LAB
2 Wed. July 22	Introduction to Biodiversity	LAB 1 - Introduction & Prokaryotes
3 Thurs. July 23	Classification of organisms	LAB 2 - Protists
4 Fri. July 24	Classification of organisms	NO LAB
5 Mon. July 27	Intraspecific & interspecific variation; Microevolution & Macroevolution	LAB 3 - Fungi
6 Tues. July 28	Intraspecific & interspecific variation; Microevolution & Macroevolution	LAB 4 - Mosses, ferns & club mosses
7 Wed. July 29	Microevolution & Macroevolution Changes in Biodiversity through time	NO LAB
8 Thurs. July 30	<b>Midterm Exam.</b> Changes in biodiversity through time	LAB 5 - Conifers & angiosperms
9 Fri. July 31	Changes in biodiversity through time	NO LAB
10 Mon. Aug. 3	<b>HOLIDAY</b>	<b>NO LAB</b>
11 Tues. Aug. 4	Biodiversity today	LAB 6 – Sponges, Cnidarians, Flatworms, & Nematodes
12 Wed. Aug. 5	Interactions between organisms and effects on biodiversity	LAB 7 - Mollusks, Annelids & Arthropods
13 Thurs. Aug. 6	Interactions between organisms and effects on biodiversity	LAB 8 - Echinoderms & Chordates
14 Fri. Aug. 7	Interactions between organisms and effects on biodiversity. Human influences on biodiversity	<b>REVIEW</b>
15 Mon. Aug. 10	Human influences on biodiversity..	<b>FINAL LAB EXAM</b>
16 Tues. Aug. 11	Human influences on biodiversity Review	NO LAB