

BIOLOGY 121.3 – THE DIVERSITY OF LIFE

Syllabus and Course Outline

St. Peter's College, Section 96 & Cumberland College, Section C10

2013-2014 T2 (Jan. 2nd to Apr. 8th)

COURSE DESCRIPTION:

Our world has millions of 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.

LEARNING OUTCOMES:

Students will be expected to learn some of the diversity of our planet (from bacteria to plants and animals), and how evolution and the environment work together to generate diversity of species. Concepts of diversity, taxonomy, species, microevolution, macroevolution and human influences on diversity will be covered. Each, and every, week Biology 121 will require 3 hours of lecture, 3 hours of lab and a minimum of 3 hrs of study.

INSTRUCTOR:

Kim Cross

Rebecca Cross

CONTACT:

kim.cross@usask.ca (general response time: 24hrs except stat holidays)

rebecca.cross@usask.ca

OFFICE HOURS:

St. Peter's (Section 96)	Cumberland Regional College (Section C10)
Bio Lab	College lobby or Staff Room
Tuesday and Thursday 12pm to 1pm, 4pm to 5pm	Wednesday 11am – 12pm

TEXTS:

1. **BIOLOGY: Exploring the Diversity of Life, 2nd Can. Ed.**, by Russell, Nelson Pub.
(either printed copy or e-text)
2. **2013-2014 Lab Manual** for Biology 120.3

GRADES:

Your final grade for Biology 121.3 is calculated based on the following marks:

Lecture Mid-Term Exams	=15%
Final Lecture Exam	=45%
Lab Assignments and Quizzes	=20%
Final Lab Exam	=20%
TOTAL GRADE	= 100%

LECTURES:

Scheduled Lecture Times

St. Peter's (Section 96)	Cumberland Regional College (Section C10)
Thursday 9am to 12pm	Wednesday 12pm to 3pm

Please see attached schedule for first lecture day. Please look on PAWS or bblearn.usask.ca for posted notes for the class and other information. In fact you should make a habit of logging in to PAWS/bblearn on a weekly basis (at a minimum) as new notes and announcements for Biology 121.3 are typically posted on Sunday or Monday of each week.

Lecture Evaluations

As a student, you must bring your current College or University of Saskatchewan student ID card to all exams and be prepared to present it for verification purposes.

It is forbidden for you to utilize, in any way during an exam, any electronic device (e.g., cell phone, dictionary, palm pilot, translator) other than a simple calculator (if required by the examiner) for solving mathematical problems.

There will be two Mid-Term Lecture Exams (Week of Feb. 3-7, 2014 and Week of Mar. 17-21, 2014) worth 7.5% each, or 15% of your grade collectively. In the event that you are absent from one of these exams, due to a medical emergency, death in the family, or another exceptional circumstance, it is **necessary for you to present documentation (e.g. medical certificate, death notice or verification) explaining the absence**, to assist in the determination of whether permission will be granted for you to write a deferred mid-term exam. **Students absent for a Mid-Term Lecture Exam must advise their lecturer in person, by telephone or by e-mail and initiate arrangements for writing a Deferred Mid-Term Exam, within THREE WORKING DAYS of the missed exam**, in order to avoid being assigned a grade of zero for the exam.

A Final Lecture Exam (worth 45% of your grade) will be held in April 2014, as arranged by the University of Saskatchewan or your College. If you are absent for a legitimate reason **you may apply for a Deferred Final Exam within THREE WORKING DAYS of the missed exam to Student Services or to your biology lecturer.**

LABORATORIES:

Scheduled Lab Times

St. Peter's lab	Cumberland Regional College lab
Tuesday 1pm to 4pm	Wednesday 4pm to 7pm

The first lab will be the week of January 6-10, 2014. Make sure you have registered for a lab section. Your instructor will show you where the lab room is located during the first lecture. You are expected to attend (and be on time for) all scheduled labs, review labs and final lab exams.

The current edition of the Lab Manual for Biology 121.3 is required for all labs (this item can be purchased at the University of Saskatchewan Book Store and other locations as announced). Please make sure that you read the lab instructions before going to your scheduled lab section. For your first lab you will also need a 2H, 3H or 4H drawing pencil, an eraser, a metric ruler, and a calculator.

Laboratory Evaluations

There are regular assignments, drawings and quizzes required for successful completion of the laboratory component of the course, and these will be outlined in the Lab Manual or during the first lab period. These will be worth 20% of your grade.

There will be a Final Laboratory Exam during the last week of classes. This is also worth 20% of your grade.

If you miss a lab assignment or the final lab exam it is **necessary for you to present documentation (e.g. medical certificate, death notice or verification) explaining the absence**, to assist in the determination of whether permission will be granted for you to complete the lab assignment or final lab exam. **Students absent for an assignment or final exam must advise their instructor in person, by telephone or by e-mail and initiate arrangements for completion of the required work, within THREE WORKING DAYS of the missed assignment or exam.** If no arrangements are made, a grade of zero will be applied to the missed assignment or exam.

STUDENTS WITH A DISABILITY:

Disability Services for Students provides accommodations and services to part-time and full-time students with temporary and permanent disabilities.

Services include exam accommodations, note-taking services, referrals for assessments, counselling and other advocacy support.

Students with a disability or students interested in more information about these services please contact your College's Student Services (682-7888 at St. Peter's) and then contact Disability Services for Students at 966-7273 or visit www.students.usask.ca/disability

The College Student Services or University of Saskatchewan Disability Services will then contact your biology instructor(s). It is not necessary, but the student may also wish to inform the instructor(s) of any accommodations previously arranged or required.

OTHER ASSISTANCE:

If you are having difficulty with the course material, please seek assistance from your instructor, student services and/or other services. For instance, the Academic Center for Excellence at St. Peter's College has been a great help to many St. Peter's students.

Please remember your instructor is there to help you both in class and out of class. Do not be afraid to ask questions after class or if you see your instructor in the hall. If you require a more private discussion arrange to meet your instructor in the faculty office.

ACADEMIC HONESTY:

The College follows the rules and guide-lines set out by the University of Saskatchewan as it pertains to academic honesty. It is the responsibility of all students to uphold the highest standards of integrity and honesty with respect to all of their academic work. It is in your best interest and is your responsibility to make yourself aware of the implications and consequences of engaging in academically dishonest activities. Please visit:

http://www.usask.ca/university_secretary/honesty/index.php

Penalties vary but a common punishment for a minor first offence is a grade of 0% on the exam or assignment and an additional -10% on the final course grade.

REQUIRED COURSE WORK:

It is to the student's benefit to be on time and attend all lectures and labs. Completion of all assignments and exams is required to pass this course.

SCHEDULES AND OUTLINES:

See following pages for course schedule and course outline. Please note there are two different schedules, one for St. Peter's College and another for Cumberland College. Please make sure you are referring to the correct schedule when downloading notes, and studying for exams.

LECTURE AND LAB SCHEDULE FOR *St. Peter's College* BIOLOGY 121.3 (2013-2014 T2)

(Approximate number of 50 minute lectures indicated in brackets)

TERM II	LECTURE TOPIC (Thurs. 9am to 12pm)	LAB TOPIC (Tues. 1pm to 4pm)
WEEK 1 (Jan. 2,3)	Intro (1); Biology as a Science (1); Intro to biodiversity (1) <i>BIOMES assignment introduced</i>	NO LAB
WEEK 2 (Jan. 6-10)	Water (1); Life (1); Origin of Life & Cell Theory (1)	LAB 1 – Introduction, Prokaryotes
WEEK 3 (Jan. 13-17)	BioGeohistory & Major Phylogenies (3)	LAB 2 – Protists
WEEK 4 (Jan. 20-24)	Major Phylogenies (3)	LAB 3 – Fungi (Quiz, Labs 1&2)
WEEK 5 (Jan. 27 - Jan. 31)	NO LECTURE, but <i>Work on BIOMES assignment</i>	NO LAB
WEEK 6 (Feb. 3-7)	Lecture during lab time →	MIDTERM EXAM I Major Phylogenies (2) Guest Lecturer: Rebecca Cross
WEEK 7 (Feb. 10-14)	Systematics, Taxonomy & Museums (3)	LAB 4 – Plants I - Green algae, Mosses, Ferns & Club Mosses (Spot Test, Labs 2&3)
WEEK 8 (Feb. 17-21)	Midterm Break, No Lecture & No Lab	
WEEK 9 (Feb. 24 – 28)	History of evolutionary thought & Evidences of evolution (3)	LAB 5 – Plants II – Conifers & Angiosperms
WEEK 10 (Mar. 3-7)	Abiotic World (3)	LAB 6 – Animals I - Sponges, Cnidarians, Flatworms & Nematodes (Spot Test, Labs 4&5)
WEEK 11 (Mar. 10-14)	Ecosystems, Community and Population interactions (2) Hardy-Weinberg & Microevolution (1)	LAB 7 – Animals II – Annelids, Molluscs & Arthropods
WEEK 12 (Mar. 17-21)	Lecture during lab time →	MIDTERM EXAM II Hardy-Weinberg & Microevolution (2) Guest Lecturer: Rebecca Cross
WEEK 13 (Mar. 24-28)	Macroevolution & Species concepts (3)	LAB 8 – Animals III - Echinoderms & Chordates (Quiz, Labs 6&7)
WEEK 14 (Mar. 31- April 4)	Environment, changing biodiversity & Humans (3)	Review Lab <i>Biome assignment discussed</i>
WEEK 15 (Apr. 7,8)	NO LECTURE	FINAL LAB EXAM Apr. 8

BIOLOGY 121.3 TEXT READINGS (2013-2014 T2)

Provided during the first lecture

LECTURE AND LAB SCHEDULE FOR *Cumberland College* BIOLOGY 121.3 (2013-2014 T2)

(Approximate number of 50 minute lectures indicated in brackets)

TERM II	LECTURE TOPIC (Wed. 12pm to 3pm)	LAB TOPIC (Wed. 4pm to 7pm)
WEEK1 (Jan. 2,3)	NO LECTURE	NO LAB
WEEK 2 (Jan. 6-10)	Intro (1); Biology as a Science (1); Intro to biodiversity (1) <i>BIOMES assignment introduced</i>	LAB 1 – Introduction, Prokaryotes
WEEK 3 (Jan. 13-17)	Water (1); Life (1); Origin of Life & Cell Theory (1)	LAB 2 – Protists
WEEK 4 (Jan. 20-24)	BioGeohistory & Major Phylogenies (3)	LAB 3 – Fungi (Quiz, Labs 1&2)
WEEK 5 (Jan. 27 - Jan. 31)	<i>Work on BIOMES assignment</i> <i>Lecture during lab time →</i>	<i>Major Phylogenies (3)</i> <i>Guest Lecturer: Rebecca Cross</i>
WEEK 6 (Feb. 3-7)	<i>Lecture during lab time →</i>	<i>MIDTERM EXAM I</i> <i>Major Phylogenies (2)</i> <i>Guest Lecturer: Rebecca Cross</i>
WEEK 7 (Feb. 10-14)	Systematics, Taxonomy & Museums (3)	LAB 4 – Plants I - Green algae, Mosses, Ferns & Club Mosses (Spot Test, Labs 2&3)
WEEK 8 (Feb. 17-21)	<i>Midterm Break, No Lecture & No Lab</i>	
WEEK 9 (Feb. 24 – Feb. 28)	History of evolutionary thought & Evidences of Evolution (3)	LAB 5 – Plants II – Conifers & Angiosperms
WEEK 10 (Mar. 3-7)	Abiotic World (3)	LAB 6 – Animals I - Sponges, Cnidarians, Flatworms & Nematodes (Spot Test, Labs 4&5)
WEEK 11 (Mar. 10-14)	Ecosystems, Community and Population interactions (2) Hardy-Weinberg & Microevolution (1)	LAB 7 – Animals II – Annelids, Molluscs & Arthropods
WEEK 12 (Mar. 17-21)	<i>Lecture during lab time →</i>	<i>MIDTERM EXAM II</i> <i>Hardy-Weinberg & Microevolution (2)</i> <i>Guest Lecturer: Rebecca Cross</i>
WEEK 13 (Mar. 24-28)	Macroevolution & Species concepts (3)	LAB 8 – Animals III - Echinoderms & Chordates (Quiz, Labs 6&7)
WEEK 14 (Mar. 31-Apr. 4)	Environment, changing biodiversity & Humans (3)	Review Lab <i>Biome assignment discussed</i>
WEEK 15 (Sat Apr. 5 and Apr. 7,8)	NO LECTURE	FINAL LAB EXAM Saturday Apr. 5

BIOLOGY 121.3 TEXT READINGS (2013-2014 T2)

Provided during the first lecture