

## DEPARTMENT OF SCIENCE

# COURSE OUTLINE – Fall 2015 BI 1080 – AN INTRODUCTION TO BIOLOGICAL DIVERSITY

**INSTRUCTOR:** Philip Johnson **PHONE:** 780-539-2863

**OFFICE:** J224 **E-MAIL:** PJohnson@gprc.ab.ca

**OFFICE HOURS:** Tuesdays 1000-1120 hrs & 1300-1430 hrs

Thursdays 1000-1130 hrs

PREREQUISITE(S)/COREQUISITE: Biology 30

## **REQUIRED TEXT/RESOURCE MATERIALS:**

"Campbell Biology – Canadian Edition" by Reece et al (2014)
Benjamin Cummings Publishing

### OR

"Campbell Biology" by Reece *et al* (9<sup>th</sup> Ed, 2011) Benjamin Cummings Publishing

"Biology on the Cutting Edge" edited by Gillies & Hewitt (2011)

Pearson Publishing

Biology 1080 Laboratory Manual 2014/15, University of Alberta

**CALENDAR DESCRIPTION:** This course examines the major lineages of life on Earth. It provides an overview of evolutionary principles and classification, the history of life, and the key adaptations of prokaryotes, protists, fungi, plants and animals. Laboratories survey the diversity of biological form and function, and introduce students to data collection and scientific writing

### **LEARNING OUTCOMES:**

- 1. Students should know and apply the principles of scientific enquiry
- 2. Students should know the principles and evidence for evolution.
- 3. Students should know taxonomic characteristics of eukaryotic organisms.
- 4. Students should be able to identify members of each taxon.

## **COURSE OBJECTIVES:**

- 1. To gain an understanding of the evolution of life on earth.
- 2. To gain a knowledge of the various taxa of eucaryotic organisms.

**CREDIT/CONTACT HOURS:** 3 credits (3-1-3)

**DELIVERY MODE(S):** Classes Tuesdays & Thursdays 1000-1120 (J201)

Labs: L1 Mondays 1430-1720 (J130) or

L2 Wednesdays 1430-1720 (J130)

Seminars: S1 Fridays 0830-0920 (J201) or

S2 Mondays 1130-1220 (J226)

**OBJECTIVES:** To provide the student with a thorough understanding of current evolutionary

theory; to show how the evolutionary process has produced a wide variety of

organisms both extinct and extant.

**SUPPLEMENTS:** Copies of the Lecture Powerpoint presentations will be available as handouts.

They can be downloaded from the BI 1080 Moodle page. Other learning

resources will be added to the page during the semester.

Mastering Biology Web site

Students can gain access to this resource using the Student Access Kit provided

with the text book. The Study Area of this site provides many useful tools

including animations, videos and practice quizzes.

## TRANSFERABILITY:

**BIOL 108 University of Alberta** 

### **EVALUATIONS:**

Lab. Work 30%

Seminar 10%

Mid-term Exam 20% Final Exam 40%

## **GRADING CRITERIA:**

GRANDE PRAIRIE REGIONAL COLLEGE					
GRADING CONVERSION CHART					
Alpha Grade	4-point Equivalent	Percentage Guidelines	Designation		
$\mathbf{A}^{+}$	4.0	90 – 100	EXCELLENT		
A	4.0	85 – 89			
$\mathbf{A}^{-}$	3.7	80 – 84	FIRST CLASS STANDING		
$\mathbf{B}^{+}$	3.3	77 – 79			
В	3.0	73 – 76	GOOD		
B <sup>-</sup>	2.7	70 – 72			
C <sup>+</sup>	2.3	67 – 69			
С	2.0	63 – 66	SATISFACTORY		
C <sup>-</sup>	1.7	60 - 62			
$\mathbf{D}^{\scriptscriptstyle +}$	1.3	55 – 59	MINIMAL PASS		
D	1.0	50 – 54			
F	0.0	0 – 49	FAIL		
WF	0.0	0	FAIL, withdrawal after the deadline		

<sup>\*\*</sup> Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability

### STUDENT RESPONSIBILITIES:

Refer to the College Policy on Student Rights and Responsibilities at www.gprc.ab.ca/d/STUDENTRIGHTSRESPONSIBILITIES

### STATEMENT ON PLAGIARISM AND CHEATING:

Refer to the College Student Misconduct: Academic and Non-Academic Policy at www.gprc.ab.ca/d/STUDENTMISCONDUCT

\*\*Note: all Academic and Administrative policies are available at www.gprc.ab.ca/about/administration/policies/

All cell phones should be switched off while students are in class. Should a cell phone ring during class, the first instance will result in a warning to all students; further instances will results in the owner of the cell phone being asked to leave that day's class.

Students will be allowed to use standard non-programmable calculators in exams. <u>All other electronic devices are prohibited</u> and should not be brought into exams. Students found to be using a prohibited electronic device during an exam will be required to leave immediately and will receive a mark of zero for that exam.

In order to succeed in Biology 1080:

- it is advisable to attend all classes and laboratory sessions, and complete all assignments in full and on time.
- students should be active participants in class discussions
- students should ask any questions that will clarify the material being presented.

# BI 1080 TOPIC OUTLINE & TEXT READINGS WINTER 2013-2014

	Readings (pages)		
TOPIC	(Campbell's Biology)		
	9 <sup>th</sup> Edition	Canadian Edition	
Introduction to BI 1080			
Unifying themes in Biology	1-27; 328-330	1-30; 353-354	
Taxonomy, Phylogeny & Systematics	536-555	576-594	
Evolutionary Principles	452-468	484-501	
Evolution of Populations	469-487	502-521	
Origin of Species	488-506	522-541	
History of Life	507-535	542-545; 548-573	
Protists	575-599	616-643	
Plants – Colonization of Land	600-617	644-663	
Plants – Seed plants	618-635	664-683	
Plants – Flowering plants	801-820	859-879	
Fungi	636-653	684-702	
Animals - Overview	654-665	703-715	
Animals – Invertebrates	666-696	716-747	
Animals - Chordates	697-727	748-775	