DEPARTMENT OF SCIENCE

COURSE OUTLINE – FALL 2018

BI1080 A2 - An Introduction to Biological Diversity – 3 (3-1-3) 105 Hours for 15 Weeks

INSTRUCTOR:	Dr Jessie Zgurski	**PHONE:**	780-539-2863 (Office) 780-903-6313 (Cell)
OFFICE:	J221	**E-MAIL:**	JZgurski@gprc.ab.ca
OFFICE HOURS:	Mon/Tues: 1:00–5:00 PM, Wed: 3:00–5:00 PM, Thurs: 9:00 AM–1:00 PM		

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.

PREREQUISITE(S)/COREQUISITE: Biology 30 (Prerequisite)

REQUIRED TEXT/RESOURCE MATERIALS:

- All required resources are available at the book store.

1) Reece, J. B., Urry, L. A., Cain, M. L., Wasserman, S. A., Minorsky, P. V., Jackson, R. B., Rawle, F. E., Durnford, D. G., Moyes, C. D., Scott, K., and Walde, S. J. 2017. *Campbell Biology, Second Canadian Edition.* Pearson Canada Inc., Don Mills, ON.

   (The First Canadian Edition of Campbell Biology is acceptable as well).

2) Gillies, S. L., and Hewitt, S. (eds). 2011. *Biology on the Cutting Edge.* Pearson Canada, Inc., Toronto, ON.

3) *Biology 1080 Laboratory Manual 2018*, University of Alberta

DELIVERY MODE(S): Lecture, Laboratory, Seminar.

COURSE OBJECTIVES: To provide the student with a thorough understanding of current evolutionary theory and to demonstrate how the evolutionary process has produced a wide variety of organisms, both extinct and extant.

LEARNING OUTCOMES:

By the end of the course, students should:

- Understand how to use the scientific method to test biological hypotheses.
- Be able to describe the process of natural selection, and be able to provide examples of the evidence for evolution via natural selection.
- Be able to use current phylogenetic and taxonomic nomenclature to discuss the evolution of life on Earth.
- Be able to list the characteristics that define the major clades of life, including the eukaryotes, fungi, land plants, vascular plants, seed plants, flowering plants, chordates, and amniotes.

NOTE: Additional detailed learning outcomes will also be provided for each topic included in the course.

TRANSFERABILITY: University of Alberta, University of Calgary, University of Lethbridge, Athabasca University, Augustana Faculty (University of Alberta), Concordia University College, Grant MacEwan University, King's University College.

***Warning:** Although we strive to make the transferability information in this document up-to-date and accurate, **the student has the final responsibility for ensuring the transferability of this course to Alberta Colleges and Universities**. Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at Alberta Transfer Guide main page http://www.transferalberta.ca or, if you do not want to navigate through the links, at http://alis.alberta.ca/ps/tsp/ta/tbi/onlinesearch.html?SearchMode=S&step=2

** Grades 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**

EVALUATIONS:	Laboratory	30%
	Seminar	15%
	Midterm (Oct 17)	25%
	Final Exam	30%

GRADING CRITERIA:

Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**.

Alpha Grade	4-point Equivalent	Percentage Guidelines		Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	90-100		C+	2.3	67-69
A	4.0	85-89		C	2.0	63-66
A-	3.7	80-84		C-	1.7	60-62

Alpha Grade	4-point Equivalent	Percentage Guidelines		Alpha Grade	4-point Equivalent	Percentage Guidelines
B+	3.3	77-79		D+	1.3	55-59
B	3.0	73-76		D	1.0	50-54
B-	2.7	70-72		F	0.0	00-49

COURSE SCHEDULE/TENTATIVE TIMELINE

Lectures: Mon. and Wed. J203, 10:00 – 11:20 AM
Laboratories: Thurs. or Fri. J130, 2:30 – 5:20 PM
Seminars: Mon. (J229) or Fri. (H211), 11:30 AM – 12:20 PM.

TOPIC	Readings (pages) (Campbell's Biology)	
	1st Canadian Edition	2nd Canadian Edition
Introduction to BI 1080	-	-
Unifying themes in Biology	1-30; 353-354	1-28; 355-356
Taxonomy, Phylogeny & Systematics	576-594	579-602
Evolutionary Principles	484-501	492-509
Evolution of Populations	502-521	510-529
Origin of Species	522-541	530-549
History of Life	542-545; 548-573	550-554; 557-581
Protists	616-643	625-651
Plants – Colonization of Land	644-663	652-671
Plants – Seed & Flowering plants	664-683	672-691; 867-871
Fungi	684-702	692-711
Animals - Overview	703-715	712-725
Animals – Invertebrates	716-747	726-758
Animals - Chordates	748-775	759-784

STUDENT RESPONSIBILITIES: Please put cell phones on vibrate or airplane mode during the lectures as a courtesy to the instructor and other students. Many studies have found cell phones to be impediments to learning in class, as they are distracting. You may use a laptop to take notes. Please do not film the class unless it is for a part of an approved disability accommodation plan.

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

STATEMENT ON PLAGIARISM AND CHEATING: Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the Student Conduct section of the College Calendar at http://www.gprc.ab.ca/programs/calendar/ or the College Policy on Student Misconduct: Plagiarism and Cheating at https://www.gprc.ab.ca/about/administration/policies

**Note: all Academic and Administrative policies are available on the same page.

Additional Information: Copies of the lecture Powerpoint presentations will be made available on Moodle. They can be downloaded from the BI 1080 Moodle page. Other learning resources, such as practice exam questions, will be added to the page during the semester.

Students can gain access to the "Mastering Biology" website 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.