# DEPARTMENT OF SCIENCE

## COURSE OUTLINE – Fall 2017

## BI 1080 – AN INTRODUCTION TO BIOLOGICAL DIVERSITY

**3 (3-1-3)** 105 hours for 15 weeks


| | | | |
|---|---|---|---|
| **INSTRUCTOR:** | Philip Johnson | **PHONE:** | 780-539-2863 |
| **OFFICE:** | J224 | **E-MAIL:** | PJohnson@gprc.ab.ca |


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|---|---|---|
| **OFFICE HOURS:** | Tuesdays & Thursdays | 1000-1120 hrs |
| | Tuesdays | 1300-1420 hrs |
| | Fridays | 1120–1250 hrs |

**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

**REQUIRED TEXT/RESOURCE MATERIALS:**

"Campbell Biology – 2nd Canadian Edition" by Reece et al (2018)
Benjamin Cummings Publishing

**OR**

"Campbell Biology – 1st Canadian Edition" by Reece *et al* (2014)
Benjamin Cummings Publishing

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

Biology 1080 Laboratory Manual 2016/17, University of Alberta

**SUPPLEMENTS:** Copies of the Lecture Powerpoint presentations will be available to students. 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.

**DELIVERY MODE(S):**

| | | |
|---|---|---|
| Classes | Mondays & Wednesdays | 1000-1120 (J201) |
| Labs: | L1 Thursdays | 1430-1720 (J130) or |
| | L2 Fridays | 1430-1720 (J130) |
| Seminars: | S1 Mondays | 1300-1350 (J202) or |
| | S2 Fridays | 1130-1220 (J228) |

**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.

**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.

**TRANSFERABILITY: UA, UC, UL, AU, CUC, GMU, KUC**

***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 few links, at http://alis.alberta.ca/ps/tsp/ta/tbi/onlinesearch.html?SearchMode=S&step=2

** 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**

**EVALUATIONS:**

| | |
|---|---|
| Lab. Work | 30% |
| Seminar | 10% |
| Mid-term Exam | 20% |
| Final Exam | 40% |

**GRADING CRITERIA:**

| GRANDE PRAIRIE REGIONAL COLLEGE<br>GRADING CONVERSION CHART | | | |
|---|---|---|---|
| **Alpha Grade** | **4-point Equivalent** | **Percentage Guidelines** | **Designation** |
| **A$^{+}$** | **4.0** | **90 – 100** | **EXCELLENT** |
| **A** | **4.0** | **85 – 89** | |
| **A$^{-}$** | **3.7** | **80 – 84** | **FIRST CLASS STANDING** |
| **B$^{+}$** | **3.3** | **77 – 79** | |
| **B** | **3.0** | **73 – 76** | **GOOD** |
| **B$^{-}$** | **2.7** | **70 – 72** | |
| **C$^{+}$** | **2.3** | **67 – 69** | **SATISFACTORY** |
| **C** | **2.0** | **63 – 66** | |
| **C$^{-}$** | **1.7** | **60 – 62** | |
| **D$^{+}$** | **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** |

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**COURSE SCHEDULE/TENTATIVE TIMELINE:**

| 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:**

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.

**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.