



DEPARTMENT OF SCIENCE
COURSE OUTLINE – BIOLOGY 1080
AN INTRODUCTION TO BIOLOGICAL DIVERSITY

INSTRUCTOR: Dr. Georgia Goth **PHONE:** 780-539-2827
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OFFICE HOURS: Monday 11:30-12:50; Wednesday 11:30-12:50; Friday 12:30-12:50

PREREQUISITE(S)/COREQUISITE: Biology 30

REQUIRED TEXT/RESOURCE MATERIALS:

Campbell, N.A., 2011, *BIOLOGY*, Canadian ed., Benjamin/ Cummings Publishing Co. **[required textbook]**

Gillies, S. and S. Hewitt, *Biology on the Cutting Edge*, Pearson Publ. Co. **[required]**

Biology 1080 Laboratory Manual
Biology Instructional Group, GPRC, and the Dept. of Biological Sciences, University of Alberta **[required]**

***Note:** The textbook recommended for this course are also used in BI 1070. It is not recommended that a student use older editions of the textbook.*

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.

CREDIT/CONTACT HOURS: 3 (3-1-3)**DELIVERY MODE(S):** Lecture, lab, seminar**OBJECTIVES:**

To provide the student with a thorough understanding of current evolutionary theory; to show how the evolutionary process has produced the wide variety of organisms both extinct and extant.

Biology 1080 is the major diversity course in the core biology program. All major groups of living organisms are examined. We examine the origin of life on Earth and proceed to the diversification of this first life-form into the major taxa living today. We follow the major geologic and evolutionary events that favored the rise of each group. Our approach is from a comparative point of view - how different organisms solve similar problems in different ways. We examine all the kingdoms of life, the major phyla within these kingdoms, and, in many cases, the major classes within these phyla.

Biology 1080 is an introduction to the interaction between diverse organisms and their environment. We will examine how the current environment is the product of the activities of organisms. The environment, in turn, places selective pressures on populations of organisms, which either adapt or go extinct. We will examine how evolution has operated over long time periods to produce major groups of organisms and how evolutionary origins are reflected in our system of classification. The principles that underlie our understanding of the major lineages will be discussed using examples from fungi, protists, animals, and plants. We will stress the importance of the environment as an evolutionary force.

TRANSFERABILITY: UA, UC, UL, AU, AF, CU, KUC

** 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

GRADING CRITERIA:

GRANDE PRAIRIE REGIONAL COLLEGE			
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

EVALUATIONS:

Midterm Exams (2):	20%
Lab Portion	30%
Seminar:	10%
Final Lecture Exam:	40%

Examinations may include both multiple choice and short answer questions.

STUDENT RESPONSIBILITIES:

Students are expected to attend all lectures, labs and seminars. All work must be handed in on time.

STATEMENT ON PLAGIARISM AND CHEATING:

Refer to the Student Conduct section of the College Admission Guide 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.

COURSE SCHEDULE/TENTATIVE TIMELINE:

Chapters 22, 23, 24 are represented on midterm 1

Chapters 25, 26, 28, 31 are represented on midterm 2

Chapters 29, 30, 32, 33 and 34 are represented on the final exam. The final exam is cumulative.