



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

INSTRUCTOR:	Dr. Georgia Goth Dr. Phil Johnson	PHONE:	780-539-2827 780-539-2863
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OFFICE HOURS: TBA

PREREQUISITE(S)/COREQUISITE: Biology 30

REQUIRED TEXT/RESOURCE MATERIALS:

Campbell, N.A., 2011, BIOLOGY, 9th ed., Benjamin/ Cummings Publishing Co.
[required textbook]

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.*

SCHEDULE:	Classes:	Tuesday/Thursday, 8:30 – 9:50
	Labs:	Monday or Tuesday, 2:30 – 5:20
	Seminars:	Monday, 11:30 – 12:20 or Friday, 8:30 – 9:20

Classes will begin January 9th, 2013

SUPPLEMENTARY RESOURCES:

Copies of the Powerpoint slides will be available for downloading from Moodle

Mastering Biology: This is available at <http://www.masteringbio.com>. You must register on the site using the information in the Student Access Kit provided with the textbook, then use the course code GPRCBI1080. . Resources available from the Study Area include practice quizzes, animations and videos.

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 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: University of Alberta, University of Calgary, University of Lethbridge, Athabasca University, MacEwan University, Concordia University College, Kings University College

**** 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:

Midterm Exam:	20%
Lab Portion	30%
Seminar:	10%
Final Lecture Exam:	40%

Examinations may include both multiple choice and short answer questions. The midterm exam covers chapters 1, 22, 23, 24, 25, and 26. The final exam is cumulative.

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 www.gprc.ab.ca/about/administration/policies/**

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

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

COURSE SCHEDULE/TENTATIVE TIMELINE:

TOPIC OUTLINE TOPIC	Readings in Campbell (9th Edition)
Introduction to BI 1080	
Unifying Themes in Biology	Chapter 1: 1-27
Darwinian Evolution	Chapter 22: 450-468
Natural Selection & Populations	Chapter 23: 469-487
Macroevolution & Speciation	Chapter 24: 488-506
Key Events in the History of Life	Chapter 25: 507-533
Taxonomy, Phylogeny & Systematics	Chapter 26: 534—555
Protists	Chapter 28: 575-599
Plants	Chapter 24: 503-504 Chapter 29: 600-617 Chapter 30: 618-635 Chapter 38: 801-813
Fungi	Chapter 31: 636-650
Animals	Chapter 32: 654-665 Chapter 33: 666-672; 677-678; 680-682 & 693-694 Chapter 34: 698-706; 708-711 & 713-714 Chapter 44: 954-956 & 959-970

