



DEPARTMENT OF SCIENCE

COURSE OUTLINE – Fall 2021

BI1050 (A2): THE ORGANIZATION AND DIVERSITY OF LIFE

3 (3-0-0) 45 Hours for 15 Weeks

Grande Prairie Regional College respectfully acknowledges that we are located on Treaty 8 territory, the traditional homeland and gathering place for many diverse Indigenous peoples. We are honoured to be on the ancestral lands of the Cree, Dene/Beaver and Métis, whose histories, languages, and cultures continue to influence our vibrant community. We are grateful to have the opportunity to work, learn, and live on this land.

INSTRUCTOR: Dr. Jessie Zgurski **PHONE:** (780) 903 6313
OFFICE: J221 **E-MAIL:** JZgurski@gprc.ab.ca
OFFICE HOURS: Monday 1:00 – 5:00 PM, Tuesday 11:00 AM – 2:00 PM, or by appointment.

CALENDAR DESCRIPTION: A study of biological concepts and mechanisms illustrated by current examples of medical and environmental problems. Students with credit in BI1050 will not receive credit in BI1070 or BI1080.

PREREQUISITE(S)/COREQUISITE: None

REQUIRED TEXT/RESOURCE MATERIALS: “Campbell Essential Biology 7th Edition,” by Eric J. Simon, Jean L. Dickey, and Jane B. Reece. Pearson Publishing. ISBN-13: 978-0-13-476503-7 (Recommended Textbook).

DELIVERY MODE(S): Lectures, Mondays 11:30 AM – 12:50 PM, Fridays 10:00 – 11:20 AM, J202.

COURSE OBJECTIVES: Students will gain an understanding of basic biological concepts with a focus on cell biology, genetics, evolution, and diversity.

LEARNING OUTCOMES: By the end of this course, students should be able to:

- Explain the scientific method and the process of hypothesis testing.
- Critically evaluate scientific information.
- Identify and describe the macromolecules of life and explain their functions in cells and organisms.
- Describe the structure of a eukaryotic cell and the functions of its organelles.
- Describe the basic structure of DNA and explain the basic mechanisms of inheritance.
- Describe how the modern theory of evolution was developed and explain the process of evolution via natural selection.

TRANSFERABILITY:

Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at the Alberta Transfer Guide main page <http://www.transferalberta.ca>.

**** 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 1 (October 4) – 15 %
Midterm 2 (November 8) – 20 %
Final Exam (Exam week) – 30 %
Assignments (X 4) – 35 %

Exams are not cumulative, and students will be permitted to bring a single page (one-sided) of notes to each exam. Other than a calculator, no computing devices will be permitted during exams, unless they are part of an approved disability accommodations plan. If you must miss an exam for a compelling reason (such as an illness), please contact the instructor to arrange an alternate exam date.

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
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:

Dates	Topic	Textbook Reading
Sept 3, 10	Topic 1: Overview of the Process of Science and the Study of Biology.	Chapter 1: 3 - 20
Sept 10, 13	Topic 2: Chemistry for Biology and the Chemistry of Life	Chapters 2, 3: 22 - 53
Sept 17, 20	Topic 3: Introduction to Cell Biology	Chapter 4: 54 - 73
Sept 20, 24	Topic 4: Introduction to Metabolism (“Working Cell”)	Chapter 5: 74 - 89
Sept 27, Oct 1	Topic 5: Cellular Respiration, Assignment 1 Due Sept 27, Submit electronically.	Chapter 6: 90 – 104
Oct 4	Midterm 1	N/A

Dates	Topic	Textbook Reading
Oct 8, 18	Topic 6: Photosynthesis, Assignment 2 Due Oct 18, Submit electronically.	Chapter 7: 106 - 119
Oct 22, 25	Topic 7: Cell Division	Chapter 8: 119 - 143
Oct 25, 29	Topic 8 – Patterns of Inheritance	Chapter 9: 144 - 169
Nov 1, 5	Topic 9 – Structure and Function of DNA Assignment 3 Due Nov 1, Submit a hard copy.	Chapter 10: 170 - 195
Nov 8	Midterm 2	N/A
Nov. 12, 15	Topic 10 – How Populations Evolve	Chapter 13: 268 - 291
Nov 19, 22	Topic 11 – How Biological Diversity Evolves	Chapter 14: 268 - 291
Nov 26, 29	Topic 12 – Evolution of Plants and Fungi, Assignment 4 Due Nov 26, Submit a hard copy.	Chapter 16: 314 - 335
Dec 3, 6	Topic 13 – Evolution of Animal Life	Chapter 17: 336 - 370

STUDENT RESPONSIBILITIES: Students are responsible for completing and submitting work on time. Late assignments will be docked 10% of the mark. However, if you have a compelling reason for requiring an extension, please contact the instructor and the late penalty may be waived.

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 Brightspace. Other learning resources, including past exam questions, will be added to the page during the semester.

ACCESSIBILITY SUPPORTS AND DISABILITY SERVICES: If you require disability-related accommodations and support, please contact the Accessibility Supports and Disability Services office. Their Email address is asds@gprc.ab.ca and their website is [Accessibility Services - Learning Commons - GPRC Learning Commons at Grande Prairie Regional College](#).

MENTAL HEALTH SUPPORTS: GPRC students have access to mental health counselling services. Please do not hesitate to seek help if you are suffering from issues such as anxiety, depression, trauma, grief, or any coping-related concerns. Go to <http://www.mystudentsupport.com/> or call 1-855-849-8641 to speak to a counsellor. The GPRC website also has mental health supports available. Please visit https://www.gprc.ab.ca/services/mental_health/ for more information.