DEPARTMENT OF SCIENCE

COURSE OUTLINE – FALL 2020

BI1050 (A2): THE ORGANIZATION AND DIVERSITY OF LIFE

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

INSTRUCTOR:	**Dr. Jessie Zgurski**	**PHONE:**	(780) 903 6313
OFFICE:	J221	**E-MAIL:**	JZgurski@gprc.ab.ca

OFFICE HOURS: Due to the COVID-19 pandemic, I cannot hold in-person office hours. However, please feel free to contact me via E-mail or phone. If you would like to arrange a meeting through Zoom, please contact me to set up an appointment. I will also be available after online lectures for questions

FALL 2020 DELIVERY: This course is delivered remotely. There are no face-to-face or onsite requirements. Students must have a computer with a webcam and reliable internet connection. Technological support is available through helpdesk@gprc.ab.ca.

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

DELIVERY MODE(S): Lectures, Monday and Wednesday 8:30 – 9:50 AM. Lectures will be delivered via ZOOM.

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.

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

TRANSFERABILITY: University of Alberta (including Augustana Faculty), University of Calgary, University of Lethbridge, Athabasca University.

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

** Please note that a 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 21) – 20%
Final Exam (Exam week) – 30 %
Assignments – 30 %
Online quizzes – 20 %

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 2, 9	Topic 1: Overview of the Process of Science and the Study of Biology.	Chapter 1: 3 - 20
Sept 9, 14	Topic 2: Chemistry for Biology and the Chemistry of Life	Chapters 2, 3: 22 - 53
Sept 16, 21	Topic 3: Introduction to Cell Biology	Chapter 4: 54 - 73

Dates	Topic	Textbook Reading
Sept 21, 23	Topic 4: Introduction to Metabolism	Chapter 5: 74 - 89
Sept 28	Topic 5: Cellular Respiration	Chapter 6: 90 – 104
Sept 30	Topic 6: Photosynthesis	Chapter 7: 106 - 119
Oct 5, 7	Topic 7: Cell Division	Chapter 8: 119 - 143
Oct 12, 14	Fall Break – No Class	N/A
Oct 19	Topic 9 – Patterns of Inheritance	Chapter 9: 144 - 169
Oct 21	Midterm	N/A
Oct 26	Topic 10 – Structure and Function of DNA	Chapter 10: 170 - 195
Oct 28	Topic 11 – DNA Technology	Chapter 12: 216 - 240
Nov. 2, 4	Topic 12 – How Populations Evolve	Chapter 12: 242 - 267
Nov. 9, 16	Topic 13 – How Biological Diversity Evolves	Chapter 13: 268 - 291
Nov 11	Remembrance Day – No Class	N/A
Nov 16, 18	Topic 14 – How Biological Diversity Evolves	Chapter 14: 268 - 291
Nov 23	Topic 15 – Microbial Life	Chapter 15: 292 - 313
Nov 25 – 30	Topic 16 – Evolution of Plants and Fungi	Chapter 16: 314 - 335
Dec 2 – 9	Topic 17 – Evolution of Animal Life	Chapter 17: 336 - 370
Dec 9	Review for Exam (If Time Permits)	N/A

STUDENT RESPONSIBILITIES: There will be a calendar placed on the course Brightspace page containing due dates for quizzes, assignments, and exams. 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.

The final exam, midterm, and quizzes will be delivered online. All exams and quizzes will have time limits and must be completed individually. The midterm will be available online during the class period on October 21, 2020 and the final exam will be available online during the scheduled time period during exam week.

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.