# **CELL BIOLOGY**

(BIOL-1101)

Course Syllabus
Fall 2021

**Instructor:** Dr. Dora Cavallo-Medved (she/her)

Office: Rm. 325 Essex Hall Email: dcavallo@uwindsor.ca Phone: 519-253-3000 ext. 4750

Laboratory Coordinator: Ms. Candy Donaldson (she/her)

Office: BioLearning Centre (BLC), Room 223 Biology Bldg.

Phone: 519-253-3000 ext. 2718 Email: candy@uwindsor.ca

### Time/Location:

**Lecture:** Online on Blackboard <a href="https://blackboard.uwindsor.ca">https://blackboard.uwindsor.ca</a>

Section 01: Tues/Thurs 10:00 -11:20 AM Online – Blackboard BIOL-1101 Site Section 02: Tues/Thurs 1:00 – 2:20 PM Online – Blackboard BIOL-1101 Site

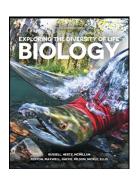
**Laboratory:** All labs are offered synchronous online through Blackboard and Microsoft Teams and face to face in the BioLearning Centre BB 223.

**Office Hours:** We will have dedicated time during the online lectures for office hours where students may ask questions about course content. Students can also email Dr. Cavallo-Medved to arrange for individual online appointments.

### **Textbook:**

(REQUIRED) - Russell, P.J. et al. <u>Biology Exploring the Diversity of Life, 4th Canadian Edition.</u> Nelson Education Ltd. (Note: UWindsor Bookstore has 3 versions: eBook, Looseleaf and Hard Cover. It's up to you which format you prefer.)
(OPTIONAL) - <u>MindTap for Biology: Exploring the Diversity of Life</u> – Access code to optional online study tools. Here is the registration link:

https://www.cengage.com/coursepages/UWindsor F21 BIOL1101



The Course Key is MTPP59JQBT8R

**NOTE:** If you purchase a new edition textbook from UWindsor bookstore the MindTap access code to online study tools is automatically included with the book. Again using MindTap is optional.

<u>Course website</u>: All lecture slides, lab exercises, supplementary materials, announcements, grades will be posted on the course website under UWindsor Blackboard (<a href="https://blackboard.uwindsor.ca">https://blackboard.uwindsor.ca</a>). It is your responsibility to download the lectures and lab materials.

# Course Objectives and Learning Outcomes: Students will work and develop:

- a. abilities to integrate knowledge presented in lectures, labs and in the reading materials
- b. insight into scientific themes, concepts and inquiries
- c. an understanding of cells, how they evolved, and how they are structured and function in metabolism, signaling, cell cycles, genetics, gene regulation, and DNA technology
- d. basic laboratory skills and be familiar with the scientific method of observation, evaluation and interpretation of data.

# **Course Content and Chapter Readings:**

Week (Estimate)	TOPICS	Chapter
Sept. 6-10	Introduction to Cell Biology Course	
Sept. 13-17	Foundations of Biology	Purple pages (middle of textbook)
	The Cell: An Overview	2
Sept. 20-24	Energy and Enzymes	3
	Cell Membranes and Signaling	4
Sept. 27-Oct. 1	Cellular Respiration	5
Oct. 4-8	Photosynthesis	6
Oct. 11-15	READING WEEK – NO CLASSES	
	Cell Cycles	7
Oct. 18-22	Genetic Recombination	8
Oct. 25-29	The Chromosomal Basis of Mendelian Inheritance	9
Nov. 1-5	Genetic Linkage, Sex linkage and Other Non- Mendelian Inheritance Mechanisms	10
Nov. 8-12	DNA Structure, Replication & Repair	11
Nov. 15-19	Gene Structure, Expression and Mutation	12
Nov. 22-26	Regulation of Gene Expression	13
Nov. 29 - Dec. 3	DNA Technologies	14
Dec. 6-8	Genomics	15

### **LABORATORIES:**

- Each student is required to 1) attend all online and/or in-person laboratory sessions, and 2) complete lab exercises each week. You will receive an email the week of Sept. 13 with more information about how to join your online lab sessions.
- Lab exercises will be uploaded throughout the semester on to the course website on Blackboard. All lab exercises are due the week they are scheduled. All lab exercises are to be completed **INDEPENDENTLY**.

### <u>Laboratory Schedule:</u> Check UWinsite to see if your lab section ends in A, B or O

#### Green = In person – Room 223 Biology Building (must complete Self-Assessment Questionnaire) Orange = Online - Microsoft TEAMS (link will be sent to you by your TA/GA) Lab Section A **Lab Section B** Lab Section O Week (online only) Sept. 6-10 **NO LABS NO LABS NO LABS** Online Orientation Sept. 13-17 Online Orientation Online Orientation Lab 2 - Online Sept. 20-24 Lab 1 – In person Lab 1 - Online Sept. 27-Oct. 1 Lab 2 - Online Lab 1 - In person Lab 2 - Online Oct. 4-8 **NO LABS NO LABS NO LABS** Oct. 11-15 **NO LABS NO LABS NO LABS** Oct. 18-22 Lab 3 - In person Lab 4 – Online Lab 3 - Online Oct. 25-29 Lab 4 - Online Lab 4 - Online Lab 3 – In Person Nov. 1-5 Lab 5 – In person Lab 6 - Online Lab 5 - Online Nov. 8-12 Lab 6 - Online Lab 6 - Online Lab 5 – In person Nov. 15-19 Lab 8 - Online Lab 7 - In person Lab 7 - Online Nov. 22-26 Lab 8 - Online Lab 7 – In person Lab 8 - Online Nov. 29-Dec.3 Online Lab Test Online Lab Test Online Lab Test Dec. 6-10 **NO LABS NO LABS NO LABS**

Students coming to campus must complete the Self-Assessment Questionnaire online
 <a href="https://www.uwindsor.ca/returntocampus/339/self-assessment-questionnaire">https://www.uwindsor.ca/returntocampus/339/self-assessment-questionnaire</a> and must abide by the
 university's vaccine policy https://www.uwindsor.ca/returntocampus/467/vaccination-policy

- Each student <u>MUST</u> complete the UWindsor online "LSB Laboratory Awareness Training for Undergraduate Students" at <a href="http://cleo.uwindsor.ca/ccc/labsafety">http://cleo.uwindsor.ca/ccc/labsafety</a> before you will be allowed to perform any labs. For more information, please see the <a href="Safety Training Instruction Page">Safety Training Instruction Page</a> on the course website. If you have already completed this training for another science course, then you **DO NOT** have to redo.
- Lab Quizzes: There will be online lab quizzes on course Blackboard site throughout the semester on the material outlined in the lab exercises.
- Lab Test: There will be one online lab test that will test your knowledge of the labs that you conducted throughout the semester. The lab test will cover lab general methodology, theory and results.

### **Participation:**

**Live lectures will be delivered on Blackboard at the regularly scheduled class times.** Students are **highly encouraged** to attend live lectures and participate. Lectures will also be recorded and links to the recordings will be posted on Blackboard so that you may review them at your own time.

Online lab sessions will <u>NOT</u> be recorded so you should make every effort to attend those online live sessions so that you can get participation marks. In the case of unavoidable temporary conflicts, it is the students' responsibility to contact Ms. Donaldson prior to the scheduled lab session so that if possible alternative arrangements may be made.

# **EXAMS:**

All exams will be primarily in a multiple choice format. There will be two midterms and a final exam. The final exam will emphasize on material not covered in the midterms. Students who miss the midterm or final exams due to legitimate reasons (i.e., illness) <u>MUST</u> contact Dr. Cavallo-Medved within <u>24 hr</u> of the midterm/final exam date. A make-up exam will be given within one week of the scheduled exam. Students are responsible for *immediately* contacting Dr. Cavallo-Medved to report any conflicts for any exam dates listed here.

MIDTERM 1 - Thursday, Oct. 7, 2021 during your scheduled lecture time

MIDTERM 2 – Thursday, Nov. 11, 2021 during your scheduled lecture time

FINAL EXAM - To Be Announced

### **Evaluation:**

Activity	Percent of grade
Lab Assignments/Discussions	5
Lab Quizzes	5
Lab Test	15
Midterm Exam I	25
Midterm Exam II	25
Final exam	25

### **Important Dates:**

**September 22** - Last day for late registration and change of course for Fall term. Last day for full tuition refund.

October 11-17 - Fall Reading Week. No classes. No labs.

# **Points of interest:**

- 1. A full semester of online learning will be challenging for both students and faculty. Please stay connected to what is happening in the course by attending lecture and lab sessions, checking the course Blackboard site daily, reading all emails, and turning off unnecessary devices during lectures, labs and testing periods. And always free to reach out to me anytime!
- 2. Students with special needs in learning should contact the Student Accessibility Services (117 Dillon Hall, 519-253-3000 x3288, <a href="mailto:disability@uwindsor.ca">disability@uwindsor.ca</a>) to make arrangements to accommodate their needs and notify Dr. Cavallo-Medved and Ms. Donaldson.
- 3. Be responsible, work hard and get involved. It is up to you whether you want to succeed. What you get out of this course will depend on what you put into it. <u>Helpful study tips</u> are to: understand the material not just memorize it; read/study as you go; manage your time effectively, use university resources, don't be afraid to ask questions, don't hesitate to use the in class office hours or email for more support.
- 4. Student Evaluation of Teaching (SET) will be administered in the last two weeks of classes
- 5. **Academic Integrity** All students at the University of Windsor consistently strive to attain the highest standards of academic performance. As part of these upmost principles, we share with you the Honour Code and Pledge for this course:

**Honour Code:** Students of the University of Windsor pursue all endeavours with honour and integrity, and will not tolerate or engage in academic or personal dishonesty

<u>Pledge</u>: As a student of the University of Windsor, I pledge to pursue all endeavours with honour and integrity, and will not tolerate or engage in academic or personal dishonesty

<u>Description</u>: As defined in the Windsor Student Code of Conduct and Senate Bylaw 31 on Academic Integrity, this pledge covers but is not limited to cheating, plagiarizing or misrepresenting the ideas of someone else, unauthorized assistance/collaboration, and falsifying data. For additional information on academic misconduct please see Academic Integrity Office website <a href="https://www.uwindsor.ca/aio">www.uwindsor.ca/aio</a>

6. **Be sure to take regular breaks and check in on your mental health and wellness**. It's important to manage your time so that you don't get overwhelmed and if you need help please reach out to any of the UWindsor Wellness Resources that are in place for all our students

http://www.uwindsor.ca/studentcounselling/sites/uwindsor.ca.studentcounselling/files/new\_wellness\_resource\_sheet.pdf

- 7. Engage in the USci Network The USci Network brings together Science students to work collaboratively in providing an integrative support system that enriches the student experience. Students can participate in many of the initiatives that provide support and engagement opportunities. More information will be sent through Blackboard in September on how you can connect to the USci Network, participate in upcoming events and be engaged! You can also check out the USci Network website at <a href="https://www.uwindsor.ca/science/usci/">https://www.uwindsor.ca/science/usci/</a> and follow on social media (Instagram, Twitter and Facebook) @usciwindsor.ca
- 8. Please take a moment to read the **University of Windsor Land Acknowledgement** The University of Windsor sits on the traditional territory of the Three Fires Confederacy of First Nations, which includes the Ojibwa, the Odawa, and the Potawatomie. We respect the longstanding relationships with First Nations people in this place in the 100-mile Windsor-Essex peninsula and the straits les détroits of Detroit.
- 9. ENJOY THE EXPERIENCE! We're all in it together!