

# WELCOME TO BIOL 150B – SPRING 2017

## MODERN BIOLOGY

Section A01 – T, W, F Engineering and Computer Science Bldg. Room 123  
9:30 AM to 10:20

Section A02 – T, W, F Engineering and Computer Science Bldg. Room 125  
1:30 PM to 2:20 PM

Instructor: Dr. R. John Nelson

Office hours: T, W from 11:00 AM to 12:00 PM in Cunningham 210 (the Herbarium) or by appointment. The best way to contact Dr. Nelson is by email at [jnelson@uvic.ca](mailto:jnelson@uvic.ca) and please put "Biology 150B" in the subject line.

**Course Description:** An introduction to the biological sciences, emphasizing cellular and physiological processes. Topics include principles of genetics, molecular biology, cell biology, plant physiology and animal physiology.

Required Text: *Campbell **Biology**, Concepts and Connections*, Canadian edition, by Reece, Taylor, Simon, Dickey, Scott, published in 2015 which is available in the bookstore.

Course Website: Biology 150B has a CourseSpaces website with lecture slides, notices, etc. I will attempt to post the lectures prior to class. The lecture notes are for personal use only.

Course Conduct: Talking in class, texting, etc., is disruptive and disrespectful to students sitting nearby and to the instructor. Please refrain from such activities or leave the lecture hall if you cannot.

Midterms, final exam, and grading policy: All exams will be multiple choice questions only. No electronic devices will be permitted during the midterms and the final exam unless this is specifically allowed by the instructor.

There will be two midterms each worth 30% of the final mark and a final exam worth 40% of the final mark. The final exam will be cumulative but with emphasis on the untested materials presented just before and after midterm 2.

Midterm 1 will be on February 1, and Midterm 2 will be on March 8. The date of the final exam will be set later in the semester.

Grading: Final grades will be assigned on the basis of the following as per UVic regulations:

A+	90-100%	B+	77-79%	C+	65-69%
A	85-89%	B	73-76%	C	60-64%
A-	80-84%	B-	70-72%	D	50-59%

The failure (F) final mark is assigned for an overall percentage of less than 50%. For additional information see: <http://web.uvic.ca/calendar2016-05/undergrad/info/regulations/grading.html>

Policy on missing an exam: If you miss (or know beforehand that you will be missing) an exam because of illness, accident, family affliction, or commitments as an UVic athlete, you are required to contact the instructor in a timely manner. No other excuses other than the above are allowed. You are required to provide supporting documentation i.e. from a medical doctor, UVic counseling services, or a member of the UVic coaching staff.

Academic Integrity: It is your responsibility to familiarize yourself with UVic's Academic Integrity Policy regarding what constitutes plagiarism, how to avoid it, and the potential consequences.

Required Readings: Readings will provide you with the necessary background to get the most out of the lectures. Please read the assigned readings prior to each class. I will let you know which sections are relevant for each lecture once we get started in the lecture program.

Chapter 1 Exploring Biology - page 2, sections 1.1 to 1.5, 1.7 to 1.11

Chapter 2 The Essential Chemistry of Life - page 21, sections 2.1 to 2.9, 2.11 to 2.16

Chapter 3 The Compounds of Cells - page 39, sections 3.1 to 3.5, 3.8, 3.9, 3.11, 3.12, 3.14, 3.15

Chapter 4 Cellular Structure - section 4.1, 4.2, 4.4 to 4.11, 4.13, 4.14, 4.16, 4.19 to 4.22

Chapter 5 Cellular Function - sections 5.1 to 5.13

Chapter 6 How Cells Harvest Chemical Energy sections - 6.1 to 6.10, 6.12, 6.13, 6.15 to 6.17

Chapter 7 Photosynthesis- page 120 section - 7.1, 7.2, 7.4, 7.5 to 7.7, 7.9, 7.10, 7.12, 7.13

Chapter 8 The Cellular Basis of Reproduction and Inheritance – sections 8.1 to 8.6, 8.8, 8.9, 8.11, 8.12 to 8.14, 8.15, 8.17, 8.20

Chapter 9 Patterns of Inheritance - page 169 sections 9.1 to 9.3, 9.6 to 9.13, 9.15 to 9.17, 9.20

Chapter 11 Gene expression - sections 11.1, 11.2, 11.4, 11.7 to 11.10, 11.12, 11.13, 11.15 to 11.17

Chapter 22 Plant Structure and Growth - page 467 sections 22.1, 22.3 – 22.8

Chapter 23 Nutrition in Plants - page 490 sections 23.1 to 23.6 23.8, 23.9

Chapter 24 Control Systems in Plants - page 507 sections 24.1 to 24.7, 24.10 to 24.13, 24.14

Chapter 25 Unifying Concepts of Animal Structure and Function – page 527 sections 25.1 to 25.8, 25.10, 25.11, 25.13 to 25.19

Chapter 26 Nutrition in Animals sections 26.1to 26.4, 26.5 to 26.7, 26.9 to 26.11, 26.13 to 26.15,

Chapter 27 Gas Exchange 26.1 to 26.4, 27.7, 27.9 to 27.12

Chapter 28 Circulation and Waste Removal page 586 sections 28.1, 28.3, 28.5, 28.7 to 28.13, 28.16 to 28.18

Chapter 29 Hormones and Endocrine Systems - page 612 sections 29.1 to 29.8, 29.10, 29.11,

Chapter 30 Animal Reproduction and Development - sections 30.1 to 30.7, 30.11, 30.13, 30.15 to 30.17

Chapter 31 Neurons and Nervous Systems - page 661 sections 31.1, 31.2, 31.4, 31.6 to 31.11, 31.13, 31.14, 31.16, 31.18,

Chapter 32 Sensation – page 686 sections 32.1 to 32.5, 32.8, 32.10, 32.11, 32.13

Chapter 33 Animal Locomotion – sections 33.1 to 33.4, 33.6 to 33.10

Chapter 34 Animal Immune systems – sections 34.1 to 34.4, 34.7 to 34.13

Chapter 10 Molecular Genetics – sections 10.1- 10.4, 10.6 to 10.9, 10.11 to 10.16

Chapter 12 DNA technology and Genomics- page 247 sections 12.1, 12.2, 12.5, 12.6, 12.8 to 12.10, 12.12, 12.13, 12.17

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