BIOCHEMISTRY 299
Biochemistry for Non-Majors
Course Outline: **Spring 2016**

Place: MacLaurin Building Room, A144 (MAC A144)
Time: Tuesday, Wednesday, Friday: 9:30 am-10:20 am

Textbook: Biochemistry A Short Course by Tymoczko, Berg, and Stryer (second edition)
Biochemistry Student Companion Deis, Gerber, Gumport, and Koeppe

Web site: UVic CourseSpaces

Instructors:

Dr. C. Nelson (course coordinator)
Office: Petch 270b
Office hours*: W 1:30-3:30 pm (or by appointment)
email: cjn@uvic.ca

Dr. C. Helbing
Office: Petch 249
Office hours*: TBA (or by appointment)
email: chelbing@uvic.ca

* No office hours or appointments will be offered the day before an exam.

Course Description: BIOC 299 introduces students to the various areas encompassed by the discipline. BIOC 299 requires a familiarization with organic chemistry and students should review functional group chemistry of organic molecules at the beginning of the course. Students must complete 2nd year organic chemistry before taking BIOC 299. Students should also review basic cell biology in preparation for this course.

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, approach the Resource Centre for Students with a Disability (RCSD) as soon as possible (http://rcsd.uvic.ca/.) in order to assess your specific needs.

iClickers: iClickers will be used in each class, starting the second week of class. While scores to iClicker questions are not collected for marks, iClicker participation is worth 5% of your final grade. Details of iClicker use and grading will be provided in class.

Exams and Marking Policy: There will be four non-cumulative multiple choice tests (see below). Each test will take place out of class time, and the times and location of the test will be posted on Moodle in the first week of class. Test topics are indicated by the colour-coding on the lecture content table on page 2. The final test (Test IV) will be written during the final exam period.
A separate 5-question concept quiz will accompany Test IV; it represents the final 5% of the course grade.

Mark breakdown:

Test I	20
Test II	20
Test III	20
Test IV	30
iClickers	5
Concept Quiz	5
TOTAL	**100**

Lecture Content: Each lecture will conform approximately to the organization used in the text with modifications indicated in the course outline. Additional material and examples may be added by the lecturer and will be posted on Moodle. The lecture schedule given below is a close approximation of what will be followed. Readings from the text for each lecture have been assigned and must be read *prior to* the lecture. Students are responsible for the lecture material and reading assignments for the class tests and final examination.

Instructor	Date	Topic	Text
Nelson	Jan. 5	Introduction to biomolecules	Ch.1
Nelson	6	Aqueous environment and pH	Ch.2
Nelson	8	Amino acids	Ch.3
Nelson	12	Protein structure	Ch.4
Nelson	13	Enzyme action	Ch.6
Nelson	15	Enzyme kinetics and regulation	Ch.7
Nelson	19	(continued)	
Nelson	20	Enzyme mechanisms	Ch.8
Nelson	22	(continued)	
Nelson	26	Lipids	Ch.11
Nelson	27	**Test I (20%)**	
Nelson	29	Biological membranes	Ch.12
Nelson	Feb.2	(continued)	
Nelson	3	Signal transduction pathways	Ch.27
Nelson	5	(continued)	
	Feb 8-12	**Reading Break**	
Nelson	16	Metabolism overview and bioenergetics	Ch.15
Nelson	17	Carbohydrates	Ch.10
Nelson	19	**Test II (20%)**	
Helbing	23	Glycolysis	Ch.16
Helbing	24	Gluconeogenesis	Ch.17
Helbing	26	Citric acid cycle	Ch.18
Helbing	Mar. 1	(continued)	Ch.19
Helbing	2	Oxidative phosphorylation	Ch.20
Helbing	4	(continued)	Ch.21
Helbing	8	**Test III (20%)**	
Helbing	9	Nucleotides and nucleic acids	Ch.33
Helbing	11	DNA packaging and genome organization	
Helbing	15	DNA replication	Ch.34/41
Helbing	16	(continued)	
Helbing	18	DNA repair	Ch.35
Helbing	22	Transcription in prokaryotes	Ch.36
Helbing	23	Transcription in eukaryotes	Ch.37
	25	**Good Friday**	
Helbing	29	RNA processing in eukaryotes	Ch.38
Helbing	30	The genetic code	Ch.39
Helbing	Apr. 1	Protein synthesis	Ch.40
	TBA	**Test IV (30%)**	

Conversion of Marks to Final Letter Grades:

Total marks from the four exams exam will be calculated, weighted and converted to a percentage and then to a letter grade as follows:

Grades	Grade Point Value	Percentage	Description
A+ A A-	9 8 7	90 – 100 85 – 89 80 – 84	**Exceptional**, **outstanding** and **excellent** performance. Normally achieved by a minority of students. These grades indicate a student who is self-initiating, exceeds expectation and has an insightful grasp of the subject matter.
B+ B B-	6 5 4	77 – 79 73 – 76 70 – 72	**Very good**, **good** and **solid** performance. Normally achieved by the largest number of students. These grades indicate a good grasp of the subject matter or excellent grasp in one area balanced with satisfactory grasp in the other area.
C+ C	3 2	65 – 69 60 – 64	**Satisfactory**, or **minimally satisfactory**. These grades indicate a satisfactory performance and knowledge of the subject matter.
D	1	50 – 59	**Marginal** Performance. A student receiving this grade demonstrated a superficial grasp of the subject matter.
F	0	0-49	**Unsatisfactory** performance. Wrote final examination and completed course requirements; no supplemental.
N**	0	0-49	Did not write examination or complete course requirements** by the end of term or session; no supplemental. Failure to complete one or more components of student evaluation will result in a grade of "N" regardless of the cumulative percentage on other elements of the course. A "N" is a failing grade and it factors into a student's GPA as 0. The maximum percentage that can accompany an N on a student's transcript is 49.

** N grades

Students who have completed the following elements will be considered to have completed the course and will be assigned a final grade:

- Test I, test II, test III, and test IV

Failure to complete one or more of these elements will result in a grade of "N" regardless of the cumulative percentage on other elements of the course. An N is a failing grade, and it factors into a student's GPA as 0. The maximum percentage that can accompany an N on a student's transcript is 49.

DEPARTMENT INFORMATION AND POLICIES

1. The Department of Biochemistry and Microbiology upholds and enforces the University's policies on academic integrity. These policies are described in the current University Calendar. All students are advised to read this section.

2. Cell phones, computers, and other electronic devices must be turned off at all times unless being used for a purpose relevant to the class. Students having a cell phone, tablet, or computer on their person during an exam will be assumed to have it for the purpose of cheating.

3. Any recordings of lectures may only be performed with written permission of the instructor, and are for personal use only. The instructor retains copyright to such recordings and all lecture materials provided for the class (electronic and otherwise); these materials must not be shared or reposted on the Internet.

4. Course materials, such as notes, problem sheets, quizzes, examinations, example sheets, or review sheets, may not be redistributed without the explicit written permission of the instructor.

5. Students are expected to be present for the midterm and final exams. Instructors may grant deferrals for midterm examinations for illness, accident, or family affliction, and students must provide appropriate documentation 48 hours after the midterm exam. The Department of Biochemistry and Microbiology considers it a breach of academic integrity for a student taking a deferred examination to discuss the exam with classmates. Similarly, students who reveal the contents of an examination to students taking a deferred examination are considered to be in violation of the University of Victoria policy on academic integrity (see current University Calendar). Deferral of a final exam must be requested with an Academic Concession form and submitted directly to Undergraduate Records. Deferred final exams for fall term courses will be arranged by the instructor. Deferred final exams for spring term courses will be arranged through Undergraduate Records and must be written before the end of the summer term as stipulated in the University Calendar.

6. Multiple choice scan sheets for machine scoring (bubble sheets) are considered the authentic exam answer paper and will be retained by the department for 1 year.

7. Professors may refuse to review/remark exams not written in indelible ink. In addition, requests for review/remark of a midterm exam must be made within one week of the exam being returned. Students are expected to promptly pick up midterm exams after marking has been completed, either in class or from the instructor.

8. Examination papers that have pages removed, or are mutilated will not be marked.

9. We reserve the right to use plagiarism detection software or other platforms to assess the integrity of student work.

Course Experience Survey (CES)

We value your feedback on this course. Towards the end of term, as in all other courses at UVic, you will have the opportunity to complete a confidential survey regarding your learning experience (CES). The survey is vital to providing feedback to us regarding the course and our teaching, as well as to help the department improve the overall program for students in the future. When it is time for you to complete the survey you will receive an email inviting you to do so. Please ensure that your current email address is listed in MyPage (http://uvic.ca/mypage) . If you do not receive an email invitation, you can go directly to http://ces.uvic.ca . You will need to use your UVic netlink ID to access the survey, which can be done on your laptop, tablet, or mobile device. We will remind you and provide you with more detailed information nearer the time but please be thinking about this important activity during the course.