



# UNIVERSITY OF CALGARY

## DEPARTMENT OF BIOLOGICAL SCIENCES COURSE OUTLINE

**1. Course:** BIOLOGY 205 – THE ORGANIZATION AND DIVERSITY OF LIFE

Lecture Section(s): L01 MWF 09:00-9:50 ST 140 FALL 2015

**Course Coordinator:** Dr. E. Lohmeier-Vogel BI 039 220-8281 [lohmeier@ucalgary.ca](mailto:lohmeier@ucalgary.ca)

**Instructors:** Dr. E. Lohmeier-Vogel BI 039 220-8281 [lohmeier@ucalgary.ca](mailto:lohmeier@ucalgary.ca)  
 Dr. R. Longair BI 042A 220-7387 [longair@ucalgary.ca](mailto:longair@ucalgary.ca)  
 Dr. P. Facchini BI 396 220-7651 [pfacchin@ucalgary.ca](mailto:pfacchin@ucalgary.ca)  
 Dr. J. Post BI 262 220-6937 [jrpost@ucalgary.ca](mailto:jrpost@ucalgary.ca)

Course description and lectures are Desire 2 Learn (D2L) under BIOL 205 L01 - (Fall 2015) - Organization & Diversity Of Life

Biological Sciences Department BI 186 403-220-3140 [biosci@ucalgary.ca](mailto:biosci@ucalgary.ca)

**2. Prerequisites:** None

**Antirequisite(s):** Credit for both Biology 205 and any of Biology 231, 233, 241 or 243 will not be allowed.

**Note:** Not open for credit to Honours, Majors or Minors in the Department of Biological Sciences or to Natural Sciences program students with a Concentration in Biological Sciences.

**3. Grading:** The University policy on grading and related matters is described sections F.1 and F.2 of the online University Calendar. In determining the overall grade in the course the following weights will be used:

<b>Exams (in class)</b>	<b>70%</b>
Sept. 30:	25%
Oct. 23:	25%
Nov. 9	20%
<b>Final Exam:</b>	<b>30%</b> (90 minutes; scheduled by the Registrar's office)

Each exam will be assigned a percentage score. The student's average percentage score for the various components listed above will be combined with the indicated weights to produce an overall percentage for the course that will be used to determine the course letter grade using the conversion scale provided below.

Letter Grade Conversions	
Cutoff	Letter Grade
≥90	A <sup>+</sup>
84	A
80	A <sup>-</sup>
76	B <sup>+</sup>
72	B
68	B <sup>-</sup>
64	C <sup>+</sup>
60	C
56	C <sup>-</sup>
50	D <sup>+</sup>
44	D
< 46	F

4. **Missed Components of Term Work:** The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in Section 3.6. It is the student's responsibility to familiarize himself/herself with these regulations. See also Section E.6 of the University Calendar
5. **Course Materials:"** *Concepts and Connections, 7<sup>th</sup> ed. Second* Custom Edition for the University of Calgary, by Campbell, Reece, Taylor, Simon and Dicky. Pearson Education (**required text**)
6. [not relevant] **Online Course Components:** List online tools being used in the class outside of those provided by the University course Management system and Top Hat classroom response system. Note: Top Hat is allowed for all classes and may be used for grades. Instructors using Top Hat should plan to accommodate students who do not have access to a cell phone or portable computing device. Course components that are free to all students and that are not dependent on prior accesses are allowed. Those with APPROVED associated optional or mandatory course fees must be listed in section 8.
7. **Examination Policy:** no other aids except pencil and eraser and student ID are allowed during exams. Students should also read the Calendar, Section G, on Examinations.
8. [not relevant] **Approved Mandatory and Optional Course Supplemental Fees:** not applicable
9. [not relevant] **Writing across the curriculum statement:** not applicable.
10. [not relevant] **Human studies statement:** indicating whether students in the course may be expected to participate as subjects or researchers. See also Section E.5 of the University Calendar.

#### **ETHICS IN THE BIOLOGICAL SCIENCES**

[not relevant] Studies in the Biological Sciences involve the use of living and dead organisms. Students taking laboratory- and field-based courses in these disciplines can expect involvement with and experimentation on such materials. Students perform dissections on dead or preserved organisms in some courses. In particular courses, students experiment on living organisms, their tissues, cells, or molecules. Sometimes field work requires students to collect a variety of living materials by many methods, including humane trapping.

[not relevant] All work on humans and other animals conforms to the Helsinki Declaration and to the regulations of the Canadian Council on Animal Care. The Department strives for the highest ethical standards consistent with stewardship of the environment for organisms whose use is not governed by statutory authority. Individuals contemplating taking courses or majoring in one of the fields of study offered by the Department of Biological Sciences should ensure that they have fully considered these issues before enrolling. Students are advised to discuss any concern they might have with the Undergraduate Program Director of the Department.

#### **11. OTHER IMPORTANT INFORMATION FOR STUDENTS:**

- (a) **Academic Misconduct:** (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under Section K. Student Misconduct to inform yourself of definitions, processes and penalties
- (b) **Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on assembly points.
- (c) **Student Accommodations:** Students needing an accommodation because of a disability or medical condition should contact Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities available at: [http://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities\\_0.pdf](http://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities_0.pdf).
- (d) Students needing an accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, preferably in writing, to the Associate Head of Biological Sciences, Dr. H. Addy by email [addy@ucalgary.ca](mailto:addy@ucalgary.ca) or phone 403 220-3140.
- (e) **Safewalk:** Campus Security will escort individuals day or night (<http://www.ucalgary.ca/security/safewalk/>). Call 220-5333 for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.
- (f) **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). As one consequence, students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information see also <http://www.ucalgary.ca/secretariat/privacy>.

**(g) Student Union Information:** VP Academic Phone: 403 220-3911 Email: [suvpaca@ucalgary.ca](mailto:suvpaca@ucalgary.ca)  
SU Faculty Rep. Phone: 403 220-3913 Email: [science1@su.ucalgary.ca](mailto:science1@su.ucalgary.ca), [science2@su.ucalgary.ca](mailto:science2@su.ucalgary.ca) and  
[science3@su.ucalgary.ca](mailto:science3@su.ucalgary.ca);  
Student Ombuds Office: 403 220-6420 Email: [ombuds@ucalgary.ca](mailto:ombuds@ucalgary.ca);  
<http://ucalgary.ca/provost/students/ombuds>

**(h) Internet and Electronic Device Information:** You can assume that in all classes that you attend, your cell phone should be turned off unless instructed otherwise. Also, communication with other individuals, via laptop computers, Blackberries or other devices connectable to the Internet is not allowed in class time unless specifically permitted by the instructor. If you violate this policy you may be asked to leave the classroom. Repeated abuse may result in a charge of misconduct.

**(i)** At the University of Calgary, feedback provided by students through the Universal Student Ratings of Instruction (USRI) survey provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses ([www.ucalgary.ca/usri](http://www.ucalgary.ca/usri)). Your responses make a difference - please participate in USRI Surveys.

Department Approval \_\_\_\_\_ ORIGINAL SIGNED \_\_\_\_\_ Date \_\_\_\_\_

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**BIOLOGY 205: THE ORGANIZATION AND DIVERSITY OF LIFE**  
COURSE SYLLABUS FALL 2015  
L01 MWF 0900 ST 140

Course Coordinator: Dr. E. Lohmeier-Vogel BI 039 220-8281 lohmeier@ucalgary.ca

Lecturers: Dr. Lohmeier-Vogel will teach the first half of the course. Contact information will be communicated during the first lecture.

Drs. Longair, Facchini and Post will each teach a module in the second half of the course. Contact information will be communicated during the first class of each module.

Required Text: *Concepts and Connections*, 7<sup>th</sup> ed. Second Custom Edition for University of Calgary. N. A. Campbell, J.B. Reece, M. R. Taylor, E. J. Simon, and J. L. Dicky. Pearson Education.

**Examinations:** Term examinations will be held during the regular lecture time and location on **Sept. 30, Oct. 23 & Nov. 9, 2015**. Make sure you are there 10 minutes before the exam. **No calculators or other electronic devices will be allowed during exam.**

The exams on **Sept. 30 and Oct. 23** will deal with Dr. Lohmeier-Vogel's component of the course and will be exclusively multiple-choice, with computer grading. Therefore, students are responsible for bringing the appropriate pencils (HB), ID cards and erasers to each exam to allow them to successfully complete the computer grading pages.

The exam on **Nov. 9** will deal with material from Dr. Longair's lectures; the format of this exam will be announced in Dr. Longair's component of the course.

The final exam (scheduled by the Registrar) will deal with material from Dr. Facchini's and Dr Post's lectures only and will be exclusively multiple-choice, with computer grading. Students are responsible for bringing the appropriate pencils (HB), ID cards and erasers to each exam to allow them to successfully complete the computer grading pages.

**Exam deferrals:** Because the term exams are held during regular lecture times, there should not be any conflict in time for students and no reason to defer an exam. **Medical difficulties that lead to the missing of an exam will require a written excuse from an M.D.** Such medical excuse forms must be provided to the course coordinator within 48 hours of the missed exam; see Faculty of Science Regulations 3.6A in University Calendar. Deferrals of final examinations are handled through the Registrar's Office.

**Attendance:** Students are expected to attend all lectures. Students should read the Attendance section in the University of Calgary Calendar.

**D2L site:** A D2L site is established for the course. Instructors may post visual material presented in lectures so that students can print these prior to or after the lecture. This allows you to annotate the figures and graphs without having to draw them in class. Other announcements will also be made using the D2L site.

**Grades, personal results, and answer key postings:** Grades for the term examinations will be posted on the D2L site for the course as a bulk file arranged in order of ascending ID number (no names). Answer keys may be viewed in BI 186 after the exam grades have been posted (see next section).

**Term Exam Regrades:**

Any student who wishes to obtain a copy of the midterm computer scoring sheet and see the midterm key exam answers may contact the personnel in the Biological Sciences office (BI 186). Any student who wants a regrade should contact the lecturer for that part of the course. The University of Calgary states that **a student shall have 15 days to appeal a grade on term work** following the date at which the grade was made available to the student (interpreted to mean, "15 days from when the grades are first available for viewing with an answer key").

**Contacting the course instructors: The instructors/coordinators involved in this course will meet with students during office hours or via a time prearranged by the student(s) and instructor (in rare instances).**

Sessions with the instructor usually accommodate one student at a time. Groups of two or three can book group appointments if they so choose, as long as the instructor is informed beforehand.

**BIOL 205 – Organization and Diversity of Life  
Fall 2015 TENTATIVE LECTURE SCHEDULE**

<b>Date</b>	<b>Topic</b>	<b>Lecturer</b>
Sept. 9	Course introduction: Atoms, compounds, chemical bonds	ELV
Sept. 11	All about water	ELV
Sept. 14	Organic compounds, carbohydrates	ELV
Sept. 16	Proteins and nucleic acids	ELV
Sept. 18	Lipids	ELV
Sept. 21	Cellular structure	ELV
Sept. 23	Nucleus and ribosomes; the endomembrane system	ELV
Sept. 25	Energy converting organelles, cytoskeleton and cell surfaces	ELV
Sept. 28	Membrane transport processes	ELV
<b>Sept. 30</b>	<b>Exam #1 (in-class, 50 minutes)</b>	ELV
Oct. 2	Energy, enzymes and metabolic pathways	ELV
Oct. 5	Cell division and reproduction	ELV
Oct. 7	Meiosis and crossing over, cell division errors	ELV
Oct. 9	Mendel's Laws	ELV
Oct.12	<b>Thanksgiving Day—No Lecture</b>	
Oct. 14	Variations on Mendel's Laws, chromosomal basis of inheritance	ELV
Oct. 16	Sex linked genes, DNA replication	ELV
Oct.19	DNA → RNA → Proteins	ELV
Oct. 21	Mutations and consequences for organisms	ELV
<b>Oct. 23</b>	<b>Exam #2 (in-class, 50 minutes)</b>	ELV
Oct. 26-Nov. 6	Why are there so many kinds of animals (and plants, and fungi ..)? Evolution and the diversity of life*	RWL
Nov. 9	<b>Exam #3 (in-class, 50 minutes)</b>	RWL
Nov. 11	<b>Remembrance Day—No Lecture</b>	
Nov. 13	<b>Reading day—No Lecture</b>	
Nov. 16-27	Up in Smoke... and 101 Other Uses for Plants*	PJF
Nov. 30-Dec. 7	Biological Conservation*	JRP

\* Details of topics for modules in the second half of the term will be provided in the first class for each module.

There will be a 90-minute **FINAL EXAM** scheduled by the Registrar on the material from Nov. 16 through Dec. 7