



UNIVERSITY OF CALGARY
FACULTY OF SCIENCE
DEPARTMENT OF BIOLOGICAL SCIENCES
COURSE OUTLINE

1. Course: **BCEM 731 – CURRENT TOPICS IN BIOCHEMISTRY**

FALL 2016

Lecture: L01 Monday 6:00-8:50PM BI 312

COURSE COORDINATOR: Dr. H.J. Vogel

Instructor(s):	Dr. H.J. Vogel	BI 423	220-6006	vogel@ucalgary.ca
	Dr. G. Moorhead	BI 144A	220-6238	moorhead@ucalgary.ca
	Dr. P. Tieleman	BI 415	220-2966	tieleman@ucalgary.ca
	Dr. S. Noskov	BI 447	210-7971	snoskov@ucalgary.ca
	Dr. Justin MacDonald		210-8433	jmacdo@ucalgary.ca
	(Plus several Guest Lecturers)			

D2L course name BCEM 731

Biological Sciences Department BI 186; (403) 220-3140; biosci@ucalgary.ca

2. **PREREQUISITES:** Consent of Coordinator

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:

Tutorial Assignments (5)	60%
Term Paper	40%

There will **NOT** be a Final Examination scheduled by the Registrar's Office.

Each assignment must receive a passing mark in order to pass the course.

Each piece of work (assignment) submitted by the student 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, which will be used to determine the course letter grade, bearing in mind that each assignment must receive a passing mark in order to pass the course.

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. Dates and times of class exercises held outside of class hours: N/A

REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY. If you have a clash with this out-of-class-time-activity, please inform your instructor as soon as possible so that alternative arrangements may be made for you.

6. **EXAMINATION POLICY:** No electronic or written aids (eg. cell phones, tablets, computers, PDAs, notes, textbooks) will be allowed during writing of any exams. Non-programmable calculators will be permitted to answer quantitative questions on exams, if applicable, and permission to do this will be clearly indicated on the examination paper. Students should also read the Calendar, [Section G](#), on Examinations.

7. **Writing across the curriculum statement:** e.g. "In this course, the quality of the student's writing in laboratory reports will be a factor in the evaluation of those reports." See also [Section E.2](#) of the University Calendar.

8. **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.

STUDIES IN THE BIOLOGICAL SCIENCES INVOLVE THE USE OF LIVING AND DEAD ORGANISMS. See also <http://www.ucalgary.ca/pubs/calendar/current/e-5.html>.

9. **OTHER IMPORTANT INFORMATION FOR STUDENTS:**

- (a) **Misconduct:** 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.

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 or phone 403 220-3140.

- (d) **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.

- (e) **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPPA). 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>.

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

- (g) **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.

- (h) **U.S.R.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). Your responses make a difference - please participate in USRI Surveys.

Department Approval ORIGINAL SIGNED _____ Date _____

Department Approval
No Final Exam: ORIGINAL SIGNED _____ Date: _____
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Grading Chart

A+ = 92%
A = 85%
A- = 80%
B+ = 77%
B = 74%
B- = 70%
F < 70%

COURSE OUTCOMES

Biochemists and molecular biologists often work for pharmaceutical companies, where their expertise in protein structural chemistry is highly valued. The vast majority of drug targets are proteins. In this course modern methods that contribute to drug design and drug development will be highlighted. Active student participation is required in this course. You will learn what biochemical methods are used in the pharmaceutical industry and at the same time gain experience in presenting to your peers.

BCEM731 2016

For the selected topics below the instructor noted will give 2-3 hours of introductory lecture to introduce the topic on the first date given. At the end of the lecture students are given suggestions for papers to read. Each student (or sometimes in groups of two) gives a presentation on that paper at the next meeting (that will occur 1 week later) followed by a discussion. The final schedule will have to be worked out in consultation with the students. The students will also write a term paper that will count for 40% of their final grade.

Lecture & Presentation Schedule - BCEM 731 Fall 2016 Room Bio 312

The general theme of the lectures is biochemistry towards pharmaceutical applications

We will normally meet on Monday evenings at 6 pm, but this is not always possible due to special holidays (e.g. Thanksgiving – October 10th, or Remembrance Day – November 11th, Reading Days November 10th - 13th).

September 12 (Note: Wednesday) and 19 (Monday): Dr. Reza Dowlatabadi: Proteins and drugs in pharmacy
Dr. Hans Vogel: Metabolomics

September 26 and October 03: Dr. Hans Vogel: Metabolomics

October 11 (Tuesday) and October 17 (Monday): Dr. Peter Tieleman: Computational Methods in drug design

October 24 and October 31: Dr. Greg Moorhead: Protein phosphorylation as a regulatory mechanism

November 7 and November 14: Dr. Sergei Noskov: Computer Modeling of Biochemical Phenomena

November 21 and November 28: Dr. Justin MacDonald

December 5: Possible Guest Lecture; Close-out, Dr. Hans Vogel

Term Paper due Monday, **December 12** at noon, 2015

Term Papers:

The paper will be in the format of a comprehensive review paper. The topic will be provided in early November by the course coordinator.