UNIVERSITY OF CALGARY
FACULTY OF SCIENCE

Department of Biological Sciences
BI 186
403 220-5261
biosci@ucalgary.ca

COURSE OUTLINE

1. **Course:** BCEM 393, Introduction to Biochemistry - Winter 2021

Coordinator(s)

Name	Email	Phone	Office	Hours
Dr Thomas Finn	thomas.finn@ucalgary.ca	403 220-5350	BI 443	Zoom meetings by appointment

Section(s)

Lecture 01: MWF 11:00 - 11:50 - Online

Instructor	Email	Phone	Office	Hours
Dr. Marie Fraser	frasm@ucalgary.ca	403 220-6145	BI 413	Zoom meetings by appointment
Dr Elmar Prenner	eprenner@ucalgary.ca	220-7632	BI 145	TBA
Dr Thomas Finn	thomas.finn@ucalgary.ca	403 220-5350	BI 443	Zoom meetings by appointment
Dr Thomas Finn	thomas.finn@ucalgary.ca	403 220-5350	BI 443	Zoom meetings by appointment

---

Course Coordinator: Dr. Thomas Finn

Laboratories:

The labs run on a two-week cycle. You will attend one Biochemistry 393 lab every two weeks. Please ensure you attend the correct lab section in the correct week. Labs will begin during the week of January 11, 2021, with the first lab section beginning on Tuesday, January 12, 2021.

Week 1 of the two-week cycle:

Section	Day and Time
B01	T 09:00 - 11:50
B02	T 12:30 - 15:20
B03	

Week 2 of the two-week cycle:

Section	Day and Time
B11	M 13:00 - 15:50
B12	M 16:30 - 19:20

Online Delivery Details:

This course is being offered online in real-time via scheduled meeting times, you are required to be online at the same time.

To help ensure Zoom sessions are private, do not share the Zoom link or password with others, or on any social media platforms. Zoom links and passwords are only intended for students registered in the course. Zoom recordings and materials presented in Zoom, including any teaching materials, must not be shared, distributed or published without the instructor's permission.

This course has a registrar scheduled, synchronous final exam. The writing time is 2 hours + 50% buffer time.

Lectures and laboratories will be synchronous and online using Zoom. Resources for students on the use of Zoom (and other learning technologies) are available via links at https://elearn.ucalgary.ca/resources-for-students/.

You are expected to attend all lectures. Some lectures may be recorded and available for review later, but not all lectures will be recorded. The recordings are for lesson capture only and will not be used for any other purpose. The links to any recordings will be on D2L.

As with in-person classes, you are expected to be professional and respectful during online teaching and learning sessions, as well as when using course tools such as discussion boards and chat. The chat function in Zoom is reserved to ask questions in a respectful manner or to respond to questions posed in class. Please note that the chat history for the session includes ALL chats (including private chats).

To encourage participation, recordings of laboratory sessions will not be available for you to review. You are expected to prepare for each lab by reading the manual and completing the pre-lab assignment, which will be due at the beginning of your lab session and will be graded. A second portion of the grade for each lab will be for participation. You are to use the name with which you registered for the class during your lab session,

so that your participation is evident to the Graduate Teaching Assistant leading your lab session. The laboratory session will be recorded so that the Graduate Teaching Assistant can review the chat for grading. The third portion of your grade for each lab session will be based on your lab report.

Course Site:

D2L: BCEM 393 L01 - (Winter 2021) - Introduction to Biochemistry

Note: Students must use their U of C account for all course correspondence.

Please include **BCEM 393** in the subject line of any e-mail messages.

2. **Requisites:**

See section 3.5.C in the Faculty of Science section of the online Calendar.

Prerequisite(s):
Chemistry 351; and Biology 311 or admission to the BHSc Honours program and Medical Sciences 341.

Antirequisite(s):
Credit for Biochemistry 393 and 341 will not be allowed.

3. **Grading:**

The University policy on grading and related matters is described in F.1 and F.2 of the online University Calendar.

In determining the overall grade in the course the following weights will be used:

Component(s)	Weighting %	Date
Online quiz I	10	February 3, 2021 during lecture time
Online quiz II	10	March 1, 2021 during lecture time
Online quiz III	10	March 24, 2021 during lecture time
Online quiz IV	10	April 14, 2021 during lecture time
Laboratory Work (6 x 4% each)	24	Dependent on lab section
Online final examination	36	Scheduled by the Registrar's Office

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component 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.

The conversion between a percentage grade and letter grade is as follows.

	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
Minimum % Required	92 %	86 %	82 %	78%	74%	70 %	66 %	62%	58%	54 %	50 %

This course will have a final exam that will be scheduled by the Registrar. The Final Examination Schedule will be published by the Registrar's Office approximately one month after the start of the term. The final exam for this course will be designed to be completed within 2 hours.

The final exam will be administered using an on-line platform. Per section G.5 of the online Academic Calendar, timed final exams administered using an on-line platform, such as D2L, will be available on the platform. Due to the scheduling of the final exams, the additional time will be added to **the end** of the registrar scheduled **synchronous** exam to support students. This way, your exam schedule accurately reflects the **start time** of the exam for any **synchronous** exams. E.g. If a **synchronous** exam is designed for 2 hours and the final exam is scheduled from 9-11am in your student centre, the additional time will be added to the **end** time of the **synchronous** exam. This means that if the exam has a 1 hour buffer time, a synchronous exam would start at 9 am and finish at 12pm. – **updated April 6, 2021**

A mark of 50% is the minimal passing grade for the lab component of this course. Attendance at labs is mandatory. Please bear in mind that a failing grade (F) will result if you do not pass the laboratory component.

---

4. **Missed Components Of Term Work:**

   The university has suspended the requirement for students to provide evidence for absences. Please do not attend medical clinics for medical notes or Commissioners for Oaths for statutory declarations.

   In the event that a student legitimately fails to submit any online assessment on time (e.g. due to illness etc...), please contact the course coordinator, or the course instructor if this course does not have a coordinator to arrange for a re-adjustment of a submission date. Absences not reported within 48 hours will not be accommodated. If an excused absence is approved, then the percentage weight of the legitimately missed assignment could also be pro-rated among the components of the course.

5. **Scheduled Out-of-Class Activities:**

   There are no scheduled out of class activities for this course.

6. **Course Materials:**

   Recommended Textbook(s):

   John L. Tymoczko; Jeremy M. Berg; Lubert Stryer, *Biochemistry: A Short Course Fourth Edition*: MacMillan.

The laboratory manual will be available from the D2L course site for download. Before the lab session, the corresponding chapter should be read and the pre-lab assignment should be completed and uploaded to the D2L dropbox for that pre-lab assignment.

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Webcam/Camera (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;
- Current antivirus and/or firewall software enabled;
- Stable internet connection.

For more information please refer to the UofC ELearning online website.

7. **Examination Policy:**

The online quizzes are synchronous and will be written during class time.

The online quizzes and final exam are open book exams. You are permitted to use the textbook, the course notes, and your personal notes. You are not permitted to search the internet, and all work must be individual.

For both on-line quizzes and the final exam, time will be adjusted for SAS students if needed and accommodations for students with issues (e.g., caregiving responsibilities, ability to secure an appropriate test-taking environment, different time zones) will be done on a case-by-case basis. Please contact Dr. Finn at least 14 business days prior to the quiz/final exam date to discuss the matter.

If you have difficulties with your connection to D2L during the online quizzes or final exam, please contact the course coordinator (Dr. Finn) by e-mail. If you are unable to e-mail, please phone the course coordinator.

IMPORTANT: It is the student's responsibility to ensure that they have adequate computer and internet access to write the exams. If a student encounters any technical issues in starting a quiz or exam, they MUST document the issue by taking a photo, screenshot, or video, and they must contact the course coordinator immediately so that either additional time can be provided to access the quiz/exam or alternative arrangements made. ***Students claiming such difficulties who do not contact the course coordinator providing evidence of technical difficulties within 15 minutes of the scheduled start of the quiz/exam will not be allowed to write the quiz/exam and will receive a grade of zero (0) on the quiz/exam.*** *If a student's quiz/exam is suspended during the quiz/exam (lost internet connection, internet browser crashes etc.), they MUST provide evidence as outlined above and contact the course coordinator immediately. Students will then be granted re-entry to suspended quizzes/exams if they began the quiz/exam on time, provided evidence of the suspension, and still have time remaining to complete their quiz/exam.*

Students should also read the Calendar, Section G, on Examinations.

8. **Approved Mandatory And Optional Course Supplemental Fees:**

There are no mandatory or optional course supplemental fees for this course.

9. **Writing Across The Curriculum Statement:**

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section E.2 of the University Calendar.

10. **Human & Living Organism Studies Statements:**

Students will not participate as subjects or researchers in human studies.

See also Section E.5 of the University Calendar.

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.

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.

Students are expected to be familiar with Section SC.4.1 of the University Calendar.

11. **Reappraisal Of Grades:**

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant

for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See Section I.3 of the University Calendar.

a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work form to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections I.1 and I.2 of the University Calendar

b. **Final Exam:**The student shall submit the request to Enrolment Services. See Section I.3 of the University Calendar.

12. **Other Important Information For Students:**

a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, Mental Health Services Website) and the Campus Mental Health Strategy website (Mental Health).

b. **SU Wellness Services:** For more information, see www.ucalgary.ca/wellnesscentre or call 403-210-9355.

c. **Sexual Violence:** The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email (svsa@ucalgary.ca) or phone at 403-220-2208. The complete University of Calgary policy on sexual violence can be viewed at (https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf)

d. **Misconduct:** Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional Code of Conduct and promote academic integrity in upholding the University of Calgary's reputation of excellence. Some examples of academic misconduct include but are not limited to: posting course material to online platforms or file sharing without the course instructor's consent; submitting or presenting work as if it were the student's own work; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. Please read the following to inform yourself more on academic integrity:

Student Handbook on Academic Integrity
Student Academic Misconduct Policy and Procedure
Research Integrity Policy

Additional information is available on the Student Success Centre Academic Integrity page

e. **Academic Accommodation Policy:** 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 procedure-for-accommodations-for-students-with-disabilities.pdf.

Students needing an accommodation in relation to their coursework or to fulfill requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Associate Head, Undergraduate of the Department of Biological Sciences, Heather Addy by email addy@ucalgary.ca or phone 403 220-6979. Religious accommodation requests relating to class, test or exam scheduling or absences must be submitted no later than **14 days** prior to the date in question. See Section E.4 of the University Calendar.

f. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). 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 Legal Services website.

g. **Student Union Information:** VP Academic, Phone: 403-220-3911 Email: suvpaca@ucalgary.ca. SU Faculty Rep., Phone: 403-220-3913 Email: sciencerep@su.ucalgary.ca. Student Ombudsman, Email: ombuds@ucalgary.ca.

h. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction (USRI) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.

i. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or non-academic misconduct, in addition to any other remedies available at law.

Classroom Performance System

You may be asked to use the classroom performance system, Top Hat, in lecture. We will use Top Hat as a learning tool, not to calculate course grades.

Course Policies

Material covered in the lectures, labs, and textbook readings may be examined during the quizzes and final examination. The final examination will be cumulative.

Please contact the course coordinator (Dr. Finn) for any administrative issues. I will respond within 24 hours on a weekday and within 48 hours over the weekend.

Attendance at your laboratory sessions is mandatory. If one week you are unable to attend your assigned session for a valid reason, please contact the course coordinator (Dr. Finn) as soon as possible to arrange a switch to another lab session or, if this is not possible, to shift the weight of the missed lab to your other lab sessions.

The first five lab reports are due seven days (168 hours, one week) after the beginning of your assigned lab session. I recommend submitting your lab report at the end of the lab session. If you later revise your lab report, you can resubmit prior to the deadline. The final lab report will be due one day (24 hours) after the beginning of your assigned lab session to accommodate the end of term. Failure to submit your report on time will result in a score of zero. Information about lab report format, rubrics, and marking policies will be provided in the "Lab Report Guidelines" posted on D2L.

Overview of the Course

We will explore the structure and function of amino acids, carbohydrates, proteins, lipids, enzymes and nucleic acids. We will use this knowledge to create a framework to gain a molecular understanding of biological processes such as carbohydrate metabolism, energy transduction, enzymatic reactions, and the biosynthesis of nucleic acid and proteins.

Electronically Approved - Apr 06 2021 16:48

Department Approval