Biochemistry
UNIVERSITY OF TORONTO

BCH311H - Biochemistry II: Nucleic Acids and Biological Information Flow
Winter 2014-2015

Coordinator and Lecturer: **S. Andreopoulos**
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Office Hours: Fridays 8:00-10am

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Lectures: Con Hall, Fri 10 am– 12 pm

Tutorials: **Thursday:** Medical Sciences Building 2158, 1-2 pm
Friday: Con Hall, 1-2 pm

Academic Integrity: We would like to encourage you to practice honest and respectful behaviour in keeping with the University of Toronto's Code of Behaviour on Academic Matters: "The concern of the Code of Behaviour on Academic Matters is with the responsibilities of all parties to the integrity of the teaching and learning relationship, whose basis remains one of mutual respect for the aims of education and for those ethical principles which must characterize the pursuit and transmission of knowledge in the University".

Course Description: This 12-week course covers the basics of nucleic acids and flow of information in biological systems, There is a major focus on information storage and transmission, as well discussion on new molecular technologies available.

Prerequisites: The prerequisite for the course is BCH210H (or equivalent credit). If this credit does not appear on your ROSI record please contact Dr. Andreopoulos NO LATER than **January 23rd, 2015** to ensure your registration is maintained.

Course Conflicts with Exam Dates: If you have a UofT course conflict with ONE or BOTH term test dates, you will need to inform Dr. Andreopoulos of this NO LATER than **January 23rd, 2015, 5pm**. There are **NO exceptions** to the deadline. All emails must be received from a U of T account and include your full name, student number, timetable and your course conflict.

Student Assessment: There will be **two term tests, and a final examination**. The first term test, worth 25% of the course mark, will cover all of Dr. Kelley's material (Lectures 1-4) and be held on Thursday February 5th, 2015, 6-7:30 pm. The second term test, worth 25% of the course mark, covers all of Dr.

Brown's material (Lectures 5-7) and will be held on Thursday March 5th, 2015, 6-7:30 pm. The **final examination,** worth 40% of the course mark, will cover **all** lectures, with more focus placed on Dr. Andreopoulos' material (Lectures 8-end). Students must check that their student numbers are correct and that their grades are accurate when grades are released. Any discrepancies or problems with exam results must be resolved BEFORE classes end. Any questions related to a specific lecture topic should be directed to the Professor who gave the lecture.
Please note that the date for the April exam is arranged by the Faculty of Arts and Science. You cannot miss an exam because you have purchased airline tickets, are on holiday etc. This is an intense 12-week course, and your enrolment indicates a commitment to the lectures and evaluation process.

Quizzes - There will be two online quizzes worth 5% each, administered on the BCH311 Blackboard Site.

The quizzes (multiple choice answer format) will take place on Monday January 26th and Monday March 16th, 2015. The first quiz will cover the material in Lectures 1-3 while the second quiz will cover material in Lectures 8-9. The quizzes will be 10 min long and will include 10 multiple-choice answer questions, with either one CORRECT or one INCORRECT choice. Once you start the quizzes online, the system will automatically log you off and submit whatever answers have been entered 10 minutes after the initial start time.

Each student will be expected to take the quizzes independently without aids (ie. without notes, textbooks, other resources etc.). The web-based quizzes will be available for 24 hours starting on the specified day at 12 AM Eastern Time Monday morning until 11:59 PM (ET). Students are responsible for arranging their schedule to write the quizzes online. **If you do not write a quiz, you will receive a grade of 0. NO EXCEPTIONS will be made and there will be no makeup quizzes or re-allocation of the marks.** The discussion board on Blackboard will also not be accessible during the time when the quizzes are in progress. Once you have written the quizzes, you may not discuss the questions with anyone. Marks will be released the next day once the results of the quizzes have been compiled and analyzed. We cannot help you if you have technical difficulties (ie. Wifi connection). If you are unsure of your internet connection, computers are available in the libraries to take the quizzes.

Missed Term Tests: Students who miss either of the term tests MUST ADHERE to the following procedure:

a) **You** MUST **email (using Utoronto email) the Course Coordinator (Dr. Andreopoulos, MSB 5219)** on the DAY of the term test. NO EXCEPTIONS will be considered. Only e-mails from the UofT domain will be answered. Do NOT use yahoo/gmail/etc. **These sources will be rejected as spam.**

b) Provide a **valid** University of Toronto student medical certificate for the **DAY** of the test. This must be submitted to Dr. Andreopoulos **PRIOR** to the date of the make-up.

c) Provide via email a written explanation (no more than 200 words) detailing the reason for missing the exam.

d) Provide via email your student number, course timetable and a list of all other course term work due the week of the term test.

NOTICE: Upon submission of the above [(a)-(d)], students will be informed of the date/time/location of the makeup exam (to be held several days after the date of the term test). However, once you have written the makeup exam and there are any questionable issues with the documentation supplied, a meeting will be arranged with Dr. Andreopoulos to discuss this.

If a test is NOT WRITTEN, a mark of zero will be assigned. Any student unable to write the final exam must contact their college registrar.

Method of Delivery: The course content will be covered in one 2-hour formal lectures each week (see exact schedule on Blackboard for dates and topics), with course notes provided in advance on Blackboard **solely for personal, noncommercial use**. **"All material in BCH311 Blackboard is, unless otherwise stated, the property of the Department of Biochemistry at the University of Toronto. Copyright and other intellectual property laws protect these material. Reproduction or retransmission of the materials, in whole or in part, in any manner, without the prior written consent is a violation of copyright law."** Help session tutorials are provided to assist with your understanding of the course material. Your instructors and TAs are available to help, but please be courteous when contacting us via email and don't forget to use the discussion board for general questions. Remember, complex issues may be too time-consuming to answer by e-mail; in this case it may be better to resolve these issues by meeting with the professor after lecture or during office hours. In addition to lectures and tutorial handouts, additional problem sets will be available online to help further your understanding of the material.

Class Participation: Activities, multiple-choice questions and problem-solving questions will be provided in both lectures and tutorials, in order to measure your comprehension of ideas. If you have an i>clicker, you are encouraged to bring it to class to participate in these questions, however, they will not be used for attendance and no participation marks will be given. Your instructors will provide more details on how you can be a part of this class, be more engaged in the material and enjoy learning why biochemistry is crucial for life.

Technology in the classroom: Do feel free to bring your laptops, iPads and handheld devices to class in order to take notes and participate, but please only use them in a manner that will not disrupt your fellow peers around you. Please do not use your computer for anything other than activities related to this biochemistry course when it is underway. Also be sure to turn off your cell phones or put them on silent before class begins, and do not text-message during the lecture. You have registered in this course and have made a commitment to be engaged and learn the material, so please do try to be focused during lectures and problem-solving review sessions. Studies have shown that distractions result in lower grades, so do focus on the material when you are present in class.

Communication throughout the course: You are responsible for accessing all course materials through the Blackboard Portal site. Here you will find the lecture notes and discussion board which are set up to assess and assist with your understanding of the material. Please feel free to post any questions you may have regarding the course on the Discussion Board so that we may share the information with your peers. When emailing the TAs directly, please only use your University of Toronto email address. Please indicate the nature of your inquiry in the subject line preceded by BCH311H. Please begin your email with Dear: and include your full name and student number so that we may be able to best address your concern in the utmost respectable manner. Emails to your professors will only be answered during business hours, so if you require an immediate response, try asking a classmate. Course-related announcements will also be posted on the Blackboard Portal site so please check in regularly.

Textbook: The readings assigned from the textbook are required. Biochemistry, First Canadian Edition, R.H. Garrett, C.M. Grisham et al. (2013, Nelson Education) are required. This textbook includes chapter questions, which may assist with your understanding of the material, and associated readings and problem sets may be assigned.

The material covered in this course is fundamental to future work you may explore in any field of biological science, nutrition, molecular biology, medicine, etc. We hope that you enjoy the course and succeed! We are here to assist you in any way possible, but it is your responsibility to keep on top of the material. This is a very fast-paced course and your attendance at the lectures is key in assisting your understanding of biochemistry, the molecular basis of life. -Sincerely the BCH311H teaching team

Lecture Schedule 2014-2015

LEC #	DATE	TOPIC	LECTURER
1	Jan 9	Nucleic Acid Structure I	Kelley
2	Jan 16	Nucleic Acid Structure II	Kelley
3	Jan 23	Techniques to Study Nucleic Acids	Kelley
	Jan 26	**QUIZ (12am -11:59pm)**	
4	Jan 30	Overview of Nucleotide Biosynthesis	Kelley
	Feb 5	**FIRST TERM TEST (6-7:30pm)**	
5	Feb 06	DNA Replication I	Brown
6	Feb 13	DNA Replication II	Brown
	Feb 17-Feb 20	**READING WEEK - no classes**	
7	Feb 27	DNA Repair	Brown
	Mar 05	**SECOND TERM TEST (6-7:30pm)**	
8	Mar 06	Transcription I and II	Andreopoulos
	Mar 08	**Last Day for Dropping Course Without Academic Penalty**	
9	Mar 13	Splicing	Andreopoulos
	Mar 16	**QUIZ (12am -11:59pm)**	
10	Mar 20	Translation I	Andreopoulos
11	Mar 27	Translation II	Andreopoulos
	Apr 8-30	**FINAL EXAM (3 hours) -Date and Location to be Announced by Arts & Science**	