

# BIOCHEMISTRY 302-201 & 302-202: GENERAL BIOCHEMISTRY

## COURSE OUTLINE

January 2017

### Calendar Description

**BIOC 302 - General Biochemistry (3 credits):** Metabolic reactions of lipids, steroids, amino acids and nucleotides; the biochemistry of replication, transcription and translation. Credit is given for only one of BIOC 300 or 302 or 303. [3-0-1]. Prerequisite: One of BIOL 201, BIOC 202, BIOC 203 and either (a) one of CHEM 204, CHEM 213 or (b) all of CHEM 205, CHEM 233 or (c) all of PHAR 220, CHEM 233.

### Instructors:

Dr. Michael J. Krisinger

Office: 4207 Copp

E-mail: mikekrisinger@hotmail.com

Lectures: Jan 4, 6, 9, 11, 16, 18, 20, 23, 25, 27, 30; Feb 1, 3, 6, 8, 10, 13, 15, 17;

Office hours: Mon, Wed, Fri 9-10:30 am or by appointment

Dr. Robert Maurus (Course Administration)

Office: 5458 Life Sciences Centre (2350 Health Sciences Mall)

E-mail: maurus@mail.ubc.ca

Lectures: February 27; March 1, 3, 6, 8, 10, 13, 15, 17, 20, 22, 24, 27, 29, 31 April 3, 5;

Office hours: Mon, Wed, Fri 9-10:30 am

### Lecture Schedule:

Section **201**: Monday, Wednesday & Fridays in Neville Scarfe 100, from 1:00 - 1:50 pm

Section **202**: Monday, Wednesday & Fridays in IRC 2, from 8:00 - 8:50 am

**PLEASE NOTE: Students must attend the lecture section they are registered in!**

**Dr. Krisinger:** Jan 4, 6, 9, 11, 13, 16, 18, 20, 23, 25, 27, 30; Feb 1, 3, 6, 8, 10;

Topics: Lipids, Fatty Acid Oxidation and Synthesis, Ketone Bodies, Cholesterol Synthesis and Lipid Transport, Digestion of Dietary Proteins, Protein Turnover, Amino Acid Catabolism (Urea cycle, Fates of Carbon Skeletons), Molecules derived from amino acids, Amino Acid Biosynthesis and Integration of Metabolism.

**Midterm: Wednesday March 1 [Start time: 6:30 pm - Location Hebb 100 and Henn 200, 201, 202 - 50% for your final grade. This exam that covers all material up to and including Feb. 10]**

**Dr. Maurus:** February 17, 27; March 1, 3, 6, 8, 10, 13, 15, 17, 20, 22, 24, 27, 29, 31; April 2, 5;

Topics: Nucleotide Metabolism; Genes, Chromosomes, Chromatin Structure, DNA Replication and Repair; PCR, RNA and Transcription, Protein synthesis.

**Final Exam: TBA [50% for your final grade. This exam that covers all material from Feb 17 to Apr 5]**

**Textbook: Required:** Lehninger: Principles of Biochemistry (Sixth edition), Worth Publishers, 2013.

### Grading:

The **midterm** exam will be worth 50% of the final grade and will cover the material on Lipids, Fatty Acid Oxidation and Synthesis, Ketone Bodies, Cholesterol Synthesis and Lipid Transport, Digestion of Dietary Proteins, Protein Turnover, Amino Acid Catabolism (Urea cycle, Fates of Carbon Skeletons), Molecules derived from amino acids, Amino Acid Biosynthesis and Integration of Metabolism (Dr. Krisinger).

The **final** exam will be worth 50% of the final grade and will cover material on Nucleotide Metabolism, Genes, Chromosomes, Chromatin Structure, DNA Replication and Repair, PCR, RNA and Transcription, and Protein synthesis (Dr. Maurus).

**Tutorials:** Tutorials will begin the second week of classes (week of January 9). Times and locations as per students' registration.

### **Teaching Assistants:**

Joslyn Quick  
Ben Vanderkruk  
Tessa Bendyshe-Walton  
Vivienne Chan

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### **IMPORTANT NOTICE REGARDING EXAMINATIONS:**

Both prescribed examinations – Midterm Exam and Final Exam - are mandatory. Students who miss a midterm or final examination will have zero recorded as their mark for that exam. Students who miss the **midterm** examination because of medical problems and want to be granted a deferred midterm exam will **have to** provide a **certificate of illness within 7 days** of the exam date. The treating doctor (at Student Health Service or any private clinic) is the only one who can document your illness. Any documentation has to be faxed directly from the attending doctor to the Instructor (Attn Dr. Krisinger) at 604-822-5227. Deferred examinations will be performed on a date and format (**oral** or perhaps written) set by the instructor.

Students who miss the **final** examination need to report to the dean's office in their area of study. For Science students information can be found at: <http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,215,410,1462>

**Final examination period:** Students should not book airline tickets until the definitive final exam schedule has been posted, as preliminary schedules are often changed. **April examinations are April 10-28 (inclusive). Note that Saturdays are included in the exam schedule.**