Questions concerning course material or evaluation of term tests should be taken up with the appropriate instructor.

Questions concerning the administration of the course in general, exemptions from tests and examinations must be taken up with the course coordinator, Dr. Hill.

Lectures.
Lectures will be held in
Monday, 7:00 to 10:00 PM

Duration.
January 7 - April 9, 2019.

Mid-Term Break - February 18 - 22, 2019

This course will deal with: a) the physiological and pathological chemistry of different organ systems and b) biochemical tests used in the diagnosis and monitoring of disease.

Session 1: - Dr. S. Hill.
11 Lectures (4 sessions), beginning Thursday January 7th.

The following topics will be covered:

• How laboratory tests are used in clinical medicine. Concept of reference values, sensitivity, specificity and predictive value of laboratory tests.
• Distribution of body fluids in normal and abnormal states. Measurement of analytes associated with fluid balance
• Role of kidney in fluid and electrolyte balance.
• Laboratory tests for assessing kidney function.
• Acid-base balance.

Session 2: - Dr. J. Macri
11 Lectures (4 sessions), beginning Monday February 4th.
This session will deal with
• Endocrinology. - purpose of the endocrine system; endocrine glands and endocrine cells; their location in the human body; what they produce; maintenance of homeostasis; clinical manifestations of endocrine disorders (hyper- and hypo-function); use of laboratory tests to diagnose endocrine disorders. We will deal with endocrinology of the pituitary, adrenal and thyroid glands.
Session 3 – Dr. S. Hill
6 Lectures (2 sessions), beginning Wednesday March 11th.
This session will deal with
• Diabetes as an example of an endocrine and metabolic disorder. We will briefly review carbohydrate and energy metabolism, and then examine the pathobiology and metabolic derangements of the disease. We will discuss the role of the laboratory in screening, diagnosis, treatment, monitoring and prognosis of the disease.

Session 4 - Dr. J. Macri
6 Lectures (2 sessions), beginning Monday March 25th.
• Calcium metabolism and hormonal regulation
• Lipid and cardiovascular metabolism and disease – overview of lipoprotein metabolism, development of coronary artery disease, myocardial infarction, biochemical evaluation of cardiac risk and injury.

Evaluation
There will be 10 on-line quizzes – January 7, 14, 25, February 7, 14, 28, March 14, 21, 28, April 2. The best 8 of 10 quizzes will count for 20% of the final mark.

There will be 2 in-class term tests – Monday February 4th and Monday March 11th. The test will be administered in the first hour of the lecture time. Format of the tests will be multiple choice. Each test will count for 20% of the total mark.

A final examination (registrar scheduled) will address the content of the entire course and will count for 40% of the total mark. This will be a multiple choice test.

The course weighting cannot be changed.

Accommodations
No make-up tests will be offered. If you miss a test and provide the appropriate documentation, the marks will be distributed as follows: remaining test 30%, final exam 50%. See the Department of Biochemistry and Biomedical Sciences, as well as the Faculty of Science policies regarding missed tests and use of the MSAF for clarification. If you miss a test and do not have the proper documentation, you will receive a ZERO for that test. Once you have submitted a quiz, test or exam, the mark will stand.

Please note: some students ask for test exemptions because of interviews for admission to professional or graduate schools. If you are out of town for your interview on the day of the test, this is appropriate. It is not, however, appropriate to request exemption because you are busy preparing for interviews, projects or other tests.

Changes to the course
The instructor and University reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, we will give reasonable notice and communication with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites regularly and to note any changes.

Course Email Box
We will maintain a course mailbox where announcements and lecture outlines are posted and questions will be answered. If you email us a question, we will copy the answer to the mailbox so all can read it.

**Course Text**

Clinical Chemistry 8th Ed’n, 2016  
Marshall WJ  
Publisher - Mosby  

The 7th edition is available on the used book market. This is an acceptable text.

The lectures will loosely follow the text. Please remember that other references will be provided as well and that the lectures may not follow the text exactly.

**Course Notes**

Lecture outlines will be available from the Biochemistry 3H03 site shortly before or immediately after each lecture. These lecture outlines are intended as an aid to help us in our lectures and you in your studying. They are **NOT** intended to provide complete coverage of the material.

**Academic Integrity**

You are expected to exhibit academic honesty and use ethical behavior in all aspects of the learning process. Academic credentials you earn are rooted in ethical principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. The behavior can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade F assigned for academic dishonesty”), and/or suspension or expulsion from the University.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Dishonesty Policy, located at www.mcmaster.ca/academicintegrity