Course codes: PATHOLOGY 5013/ BIOCHEMISTRY 5813/ 4813  
Credit hours: 3  Title: Biochemistry of Clinical Disorders  
Autumn Term 2018

Course Description: This introductory course in Clinical Medical Biochemistry, explains the pathophysiologic principles underlying a wide variety of clinical disorders, the laboratory tests that assist in their diagnosis and some methodologies involved in these tests. It also provides an overview on the principles of laboratory testing in general and the criteria of a clinically valuable test. The course is rich in medical terminology and description of clinical cases. The clinical disorders that are addressed in this course include those of the kidney, liver, heart, gastrointestinal tract, adrenal as well as the main endocrine and some metabolic disorders. Drugs of abuse, therapeutic drug monitoring, trace metals and basics in hematology, coagulation and nutrition are also amongst the topics taught here.

Course Pre-requisites: (For 4813) BIOC 3300 and BIOC 3400 and BIOC 3700 or consent of instructor.

Time and Place:  
Monday, Wednesday, Friday  
8:30 a.m. - 9:30 a.m. (exceptions- 8-9 am- please see attached schedule)  
Location: TBD (Please review the schedule for Autumn 2018)

Course Coordinator: Dr. Manal Elnenaei  
Room 619 MacKenzie  
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Lecturers:  
Dr. Bassam Nassar bassam.nassar@nshealth.ca  
Dr. Andrea Thoni andrea.thoni@nshealth.ca  
Dr. Amy Lou amy.lou@nshealth.ca  
Dr. Zaiping Liu zaiping.liu@iwk.nshealth.ca  
Dr. Lori Beach lori.beach@iwk.nshealth.ca  
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Dr. Jason Quinn Jason.Quinn@nshealth.ca  
Dr. Allam Shawwa allam.shawwa@nshealth.ca  
Dr. Thomas Ransom Thomas.ransom@nshealth.ca

Course Learning Outcomes: Upon completion of this course, students should be able to:  
- Appreciate the criteria of a valuable test from both an analytical and clinical perspective
• Understand the normal physiology of a variety of human systems in state of health.
• Understand the pathophysiology underlying a number of clinical conditions that affect various human systems/organs in states of disease.
• Demonstrate the laboratory tests that can help diagnose and manage these conditions and understand some of the methodology behind them.
• Demonstrate the impact of common drugs of abuse and trace metals on human health and realize some of the methods available to measure these.
• Outline some of the common metabolic disorders including those that are inherited and determine their clinical and laboratory diagnostic features.
• Diagnose certain common clinical conditions through case studies, outline their significance and management and appreciate the value of therapeutic drug monitoring.

Course Schedule:

Please refer to the specific schedule provided for Autumn 2018.

Course Assessment:

Criteria for evaluation of students in this course is as follows:

1. Attendance of lectures: This constitutes 10% of the final grade.

2. Regular Assignments: These relate to the lecture topics and are to be handed in on the date set by the lecturer.

3. Student Presentations: Topics are chosen by faculty specifically for post-graduate students and are usually current laboratory issues related to the lecture or course material. Students are to prepare an oral presentation of the topic.

*Assignments (and presentation if relevant) constitute 20% of the final grade

4. Mid-term examination: This will be in October; refer to the schedule for exact date.

5. Final examination: This will be in December; refer to the schedule for exact date.

* Examinations constitute 70% of the final grade (30% for Mid-term and 40% for Final examination).
Course – Specific Policies:

1. Attendance of all lectures and presentations listed is expected. Up to 2% of the final mark may be lost for each lecture not attended without a valid reason.
2. If absence is required for a valid reason, e-mail notification to the lecturer for that day is required and copied to the course coordinator. Evidence may be requested to validate the reason of absence.
3. Submission of assignments beyond the date specified by the lecturer will result in a deduction of a minimum of 20% of the original mark.
4. If an assignment extension is required for valid reasons, written communication must be made with the lecturer in advance of the deadline, denoting reason and additional time required.
5. Lecture slides will be provided either prior to each lecture or soon afterwards via e-mail.
6. Students are expected to review Dalhousie University policy on plagiarism
   https://www.dal.ca/dept/university_secretariat/academic-integrity/plagiarism-cheating.html

Resources and Study Material:

1. **Main:**
   1. Mandatory: Faculty lecture notes and handouts.
   2. Optional: Clinical Chemistry
      William Marshall, Mártta Lapsley, Andrew Day, Elsevier

2. **Additional:**
   3. Tietz Fundamentals of Clinical Chemistry
      Carl A. Burtis, Edward R. Ashwood & David E. Burns, eds. Saunders, Elsevier
   4. Henry’s Clinical Diagnosis and Management by Laboratory Methods:
      22nd ed., 2011
      Richard A. McPherson & Matthew Pincus
      Saunders, Elsevier
   5. Medical and Scientific Textbooks and Journals:
      Chapters, reviews and articles provided or recommended by the lecturer(s)
**Student Support Resources:**

The following links may be useful if requiring advice on academic support and or fair dealings:

1. General Academic Support – Advising  
   Halifax: https://www.dal.ca/campus_life/academic-support/advising.html  
   Truro: https://www.dal.ca/about-dal/agricultural-campus/student-success-centre/academic-support.html

**University Policies, Statements, Guidelines:**

This course is governed by the academic rules and regulations set forth in the University Calendar and the Senate.  
https://academiccalendar.dal.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog

**Academic Integrity**

At Dalhousie University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect (*The Center for Academic Integrity, Duke University, 1999*). As a student, you are required to demonstrate these values in all of the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity.  
(Read more: http://www.dal.ca/dept/university_secretariat/academic-integrity.html)

**Accessibility**

The Advising and Access Centre and the Student Success Centre (Agricultural Campus) serve as Dalhousie’s centres for expertise on student accessibility and accommodation. Our work is governed by Dalhousie’s Student Accommodation Policy to best support the needs of Dalhousie students. Our team work with students who request accommodation as a result of: disability, religious obligation, an experienced barrier related to any other characteristic protected under Canadian Human Rights legislation. (Read more at: https://www.dal.ca/campus_life/academic-support/accessibility.html)

**Student Code of Conduct**

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don’t follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner. If an informal resolution can’t be reached, or would be inappropriate, procedures exist for formal dispute resolution.  
Diversity and Inclusion – Culture of Respect
Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported.
(read more: http://www.dal.ca/cultureofrespect.html)

Recognition of Mi’kmaq Territory
Dalhousie University acknowledges that the University is located on Traditional Mi’kmaq Territory

Other Policies
Important Dates in the Academic Year (including add/drop dates)
http://www.dal.ca/academics/important_dates.html
University Grading Practices: Statement of Principles and Procedures
https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html
Scent-Free Program http://www.dal.ca/dept/safety/programs-services/occupational-safety/scent-free.html