Biochemistry 9522R (Fall 2017)

Biological mass spectrometry and Proteomics

1. Course Information:

   Lecture Time: 10:30 am to 12:30 am on Thursday between Oct 26 and November 30
   Location: MSB 346

   Note: Thursday Nov. 16 class location is room MSB 193C/D

2. Instructor information:

   Prof. Gilles Lajoie (course coordinator)
   Office SDRI G31
   Phone: 519-661-3054
   Email: glajoie@uwo.ca

3. Course description:

   The course will begin with lectures defining the goals of proteomics, the techniques involved and discussing typical workflows and essential theories in acquiring proteomics data for scientific research. In the remaining lectures, each student will select recent topics important in the field of proteomics and/or clinical proteomics, present a summary of the selected topic and lead a discussion with classmates.

   Learning Outcomes: Upon successful completion of this course, students will be able to describe and summarize the key activities involved in proteomics studies applied to biochemical and life sciences research. They will be able to describe the common experimental setup that generates mass spectrometric data for proteomics research, and explain their purposes. Finally, students will be able to review, explain and critique the applications of proteomics in life sciences and health related research.

4. Course material:

   Recommended Review Articles
5. Methods of Evaluation:
15% Assignment (Due November 23)

40% Presentation on an advance topic in proteomics

- By the end of the third lecture, students must submit their topic of presentation to the instructor via email.
- In the first day of class, a draw will be made to decide the order of presentations.
- Evaluation criteria:
  • Content, organization, delivery effectiveness
  • Responses to questions
- A peer-reviewed evaluation will make up a part of this component

15% In class participation

- Evaluation criteria:
  • General positive learning attitude
  • Ability to formulate intelligent and important questions and to effectively and professionally respond to others’ comments and questions
  • Giving feedbacks to fellow students on their presentations
- A peer-reviewed evaluation will make up a part of this component

30% Final exam (tentatively on December 12)

- Two hour final exam based on all course materials including content covered in the presentations given by students.

7. Number of Students:

The maximum enrollment of this course is 16 students.

8. Course Policies

Due to the grading of class participation, attendance in all lectures is mandatory for all students registered in this course. Missed lectures, assignments and presentations will result in a mark of zero unless academic accommodation has been granted. Requests of academic accommodation should be directed to the Biochemistry Graduate Program Administrator, Ms. Barb Green, in MSB 342.

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:
http://www.uwo.ca/univsec/handbook/appeals/scholastic_discipline_grad.pdf

All required papers may be subject to submission for textual similarity review to the commercial plagiarism-detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as
source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (http://www.turnitin.com).

9. Helpful Resources @ Western for Graduate Students

LS counsellors are ready to help you improve your learning skills. We offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

The Student Success Centre: http://success.uwo.ca/
As part of a successful graduate student experience at Western, we encourage students to make their health and wellness a priority. Western provides several on campus health-related services to help you achieve optimum health and engage in healthy living while pursuing your graduate degree. For example, to support physical activity, all students, as part of their registration, receive membership in Western’s Campus Recreation Centre. Numerous cultural events are offered throughout the year. Please check out the Faculty of Music web page http://www.music.uwo.ca/, and our own McIntosh Gallery http://www.mcintoshgallery.ca/. Information regarding health- and wellness-related services available to students may be found at http://www.health.uwo.ca/

Students seeking help regarding mental health concerns are advised to speak to someone they feel comfortable confiding in, such as their faculty supervisor, their program director (graduate chair), or other relevant administrators in their unit. Campus mental health resources may be found at http://www.health.uwo.ca/mental_health/resources.html
To help you learn more about mental health, Western has developed an interactive mental health learning module, found here: http://www.health.uwo.ca/mental_health/module.html. This module is 30 minutes in length and provides participants with a basic understanding of mental health issues and of available campus and community resources. Topics include stress, anxiety, depression, suicide and eating disorders. After successful completion of the module, participants receive a certificate confirming their participation.