BIOCHEMISTRY 403 CRN 10259: BIOCHEMISTRY OF SIGNAL TRANSDUCTION
COURSE OUTLINE – FALL 2020

Biochemistry of Signal Transduction
The objective of this course is to examine in detail the biochemical basis of the transmission of molecular signals from a cell's exterior to its interior and how this can bring about changes in cellular behavior and gene expression. The course emphasizes the biochemical concepts underlying signal transduction and the types of experimental analysis that are employed to study signaling pathways. A major focus will be on how signalling can be disrupted in human disease, specifically cancer and viral infection

Instructors: **Dr John Burke**

Dr. Burke:
jeburke@uvic.ca
Office Hours: Monday Thursday 11:30-12:30 Online (zoom link will be available on brightspace)

Schedule: Virtual Lecture posted Monday, Synchronous lecture/group work Thursday 10:00 am - 11:20 am, (zoom link will be available on brightspace)

Readings: Readings will be posted on the brightspace web site.

Topics (with approximate dates)

Dates important dates in bold	Topic

Student Evaluation:

Practice quizzes (available weekly on brightspace)	**25%**
Midterm Exam 1 (Oct 19th):	30%
Midterm Exam 2 (Dec 3rd)	15%
In class group Assignments (3): will be assigned 1 week in advance	30%

There is no assigned text for the course; Topics will be drawn from primary and review literature, assigned in class, and posted on the course website. Students are expected to complete the reading assignments and the material will be included in the midterm, quizzes, and final exams. There will be 3 in-class group assignments throughout the course. Students must be present (digitally) and participate in the class to receive a mark for these assignments.

Learning (CAL) as soon as possible in order to assess your specific needs.
https://www.uvic.ca/services/cal/index.php

Expected learning Outcomes:

Diversity of signaling pathways: students should be able to recognize emerging patterns of pathway organization and give examples. They should be able to identify similarity and differences between pathways and apply their knowledge to novel problems.

How we study cellular signaling: students should be able to articulate how different types of experiments are performed and what information is gained from different experiments. It is expected that students will be able to apply this knowledge to novel biochemical problems.

Experimental basis for pathway summaries: students are expected to be able to describe how we know given information about a pathway. For example, what is the experimental evidence supporting a given claim?

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