Cellular Signaling
CHEM F675X
CRN 32547
3 Credits
Jan 17, 2023 - May 1, 2023

Delivery: In Person, MWF 9:30am-10:30am, REIC 207

Instructor:
Dr. Larry Duffy
246 WRRB/REIC 184
lkduffy@alaska.edu
907-474-7525

Office Hours: Wednesday 10:30am-11:00am in REIC 184

Course Description:
Cellular signaling is important in molecular systems and constitutes a central topic in biochemical and medical studies. The course discusses the basic concept of signals, signal transduction, the role of proteins, the modification of proteins for regulation, and signals XXXX in RNA transduction. Major topics include G-Proteins, Second Messengers, Protein KInases, Tyrosine KInase, 7 Transmembrane Domain Proteins, Signal Transduction by Proteolysis and Neurotransmitters.

Textbook:
Title: Cellular Signal Processing: An Introduction to the Molecular Mechanisms of Signal Transduction
ISBN: 978-0-8153-4534-3
Edition: 2nd
Author: Marks, Klingmuller, Muller-Decker
Publisher: Routledge

Learning Outcomes and Course Goals:
- Develop an overview of molecular signaling
- Comprehend the coordination of biochemical pathways
- Ability to explain the molecular basis of cellular signaling
- Ability to explain the signal disruptions diseases

Evaluation:
- Four exams including a midterm and final
- Student participation in discussions and attendance
- Grades will be based on the +/- system in accordance with the UAF Catalog. I follow the UAF incomplete policy.

Student Protections:

- Every qualified student is welcome. I am happy to work with Veteran Services, Rural Services, and Disability Services to arrange reasonable accommodations.
- Students are protected by Title IX
- Minors have additional protections
- Please check the UAF Handbook for additional information: www.uaf.edu/handbook

Technology:

- Students must have access to email for communicating with the instructor.

Lecture Schedule: Please see the Academic Calendar or UAF website for final exam schedule and other important dates.

Date	Chapter/Subtopic	Topic
Jan 18	1.1	Metaphors
Jan 20	1.2	Signals
Jan 23	1.3	Binary Switches
Jan 25	1.4	Transducing Proteins
Jan 27	1.7	Network Format.de deSudd in

Feb 24	3.2	The RNA World
Feb 27	3.3	Signal - Controlled Membrane Transport
March 1	3.4	Sensor - Dependent Signal Processing
March 3	3.6	Evolution of Signaling Me

COVID-19 statement

Student protections statement

Disability services statement:

ASUAF advocacy statement:

Student Academic Support

-
-
-
-
-
-

Student Resources: