

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](mailto: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 Vetáiríam Va©

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:

