

Chem

**Learning Outcomes:**

- To understand membrane potential and excitability
- To understand neuronal action potentials
- To understand synaptic transmission
- To understand structure/function aspects of voltage and ligand-gated ion channels
- To understand G-protein signaling
- To understand early brain development (gastrulation, neurulation)
- To understand cellular adhesion and neuronal process outgrowth
- To understand basic techniques and experimental approaches in cellular and molecular neuroscience.

**Course Structure:**

The teaching methods employed in this course will consist of lectures (70%), groupwork (10%), and class discussions (20%). The suggested textbooks serve as a basic reference. Being prepared for discussion is essential, hence preparation and reading of material is critical. **Canvas** (<https://canvas.alaska.edu>) will be utilized as a central communication platform for announcements, posting of lectures and reading material. It is assumed that every student is frequently visiting Canvas to check for announcements as well as email notifications. Please verify your email address is correct and current.

**Course Policies:****Attendance and Participation**

Regular attendance is expected to ensure consistency in discussions and presentations. Active student participation is essential and will be accounted for in the final grade (

**Portfolio (HW)**

Written assignments will be used to generate summaries of key topics discussed. Summaries will be guided by questions given by the instructor (100 points). There will be one midterm evaluation due prior to taking the midterm exam, and one final evaluation due before taking the final exam. There will be one midterm evaluation and one final evaluation (see course schedule).

**Group project**

There will be a group project with due dates spread throughout the semester (80 points). Each group will develop an interactive activity for the class to do that helps to teach the material. Instructions will be posted on Canvas.

**Late assignments**

Registrar's Office by Friday, Mach 31, 2023. The last day for instructor-initiated withdrawal is Friday, Mach 31, 2023 (W grade appears on academic record). An incomplete grade will only be assigned if a student misses the final exam for an outstanding reason, such as a medical problem, a death in the family, etc.

**Student success**

There are a large number of resources to help students who would like to perform at their best. The student may make an appointment to see the instructor for help. (The instructor will attempt to reply to email questions within 48 hours during the school week.)

**Disabilities**

Students with a physical or learning disability are required to identify themselves to the Disability Services office, 474-7043, located in the Center for Health and Counseling. The student must provide documentation of the disability. Disability Services will then notify the instructor of special arrangements for taking tests, working homework assignments, and doing lab work.

**Computer Access:**

university student conduct review and disciplinary action by the university. The Student Code of Conduct may also apply to behavior that occurs off campus when it may present a potential danger or threat to the health and safety of others or may reasonably lead to a hostile environment on campus. The Student Code of Conduct may also apply to behavior exhibited online or electronically via email, social media, text messaging, or other electronic means.

**Student protections and services statement:** Every qualified student is welcome in my classroom. As needed, I am happy to work with you, disability services, veterans' services, rural student services, etc. to find reasonable accommodations. Students at this university are protected against sexual harassment and discrimination (Title IX), and minors have additional protections. As required, if I notice or am informed of certain types of