

Cellular and Molecular Neuroscience

Instructor: Thomas Kuhn, 907-474-5752, tbkuhn@alaska.edu
Department of Chemistry and Biochemistry
Reichardt Building Room 184

Lecture: MWF 11:45 am 12:45 pm (YES, you can bring your lunch)

Office Hours: immediately following lecture or arrange via phone/email

Textbooks: either one of the three text books will be adequate for the course

From Molecules to Networks: An Introduction to Cellular and Molecular Neuroscience (3rd Edition, 2014); Academic Press **ISBN-13:** 978-0123971791 or **ISBN-10:** 0123971799
John H. Byrne, Ruth Heidelberger, M. Neal Waxham;

From Neuron to Brain (5th Edition); Sinauer Associates
John G. Nicholls et al, **ISBN-13:** 978-0878936090 or **ISBN-10:** 0878936092

Neuroscience (5th Edition); Sinauer Associates
Dale Purves et al., **ISBN-13:** 978-0878936953 or **ISBN-10:** 0878936955

Additional Reading: scientific research articles and review articles (PDT5PDT5PDBrtilacadrd)0 1 162.02 368.45

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)

Ethical Considerations:

advisor will be notified of this failing grade and

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