Cellular Neuroscience
Course Syllabus

Course Prerequisites

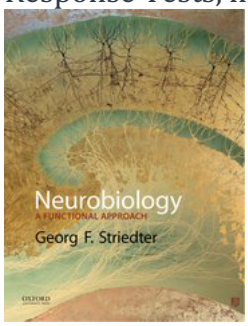
Bi360 or equivalent neuroscience background is required. If you are uncertain about whether you have met the prerequisites, please email me.
If you lack the prerequisites, I encourage you to read Chapter 1 of the textbook before the start of the course.

Course topics and goals

This course covers cellular neuroscience, which I like to think of as functional neurobiology. You will learn the components of neurons and how they interact with each other and other cell types; methods neuroscientists use to study the nervous system (including electrophysiology, optogenetics, and other cutting edge techniques); and a glimpse of some neurological disorders.
The goals of this course are to give you:
(1) a basic knowledge of the fundamental concepts of neuroscience with a cellular focus;
(2) a working neuroscience vocabulary;
(3) an understanding of the methods used by neuroscientists;
and (4) practice thinking analytically and synthesizing information,
so that you will be better equipped to read and critically analyze primary scientific literature or media reports on neuroscience topics.

Reading

Background Readings are from "Neurobiology: A Functional Approach" by Georg Striedter. This is available as a hard copy Links to an external site. or as an ebook Links to an external site..
In each weekly module, there will be a page dedicated to each chapter to be covered, with an overview, focus material, and additional resources including videos.
In addition, for each Chapter there will be a *Main Reading*, generally a paper from the primary or review literature. The material from these readings will be tested in the Free Response Tests, in addition to some conceptual questions from the textbook material.



Focus Material

I have provided additional material on subjects that delve beyond what is provided in the textbook. Often these concern subjects that are close to my heart, or concern subjects that get short shrift in the textbook and research in general, or are subject matters that I think one should know as a neuroscientist with a molecular / cellular focus. This material will be tested in both the Tests and the Free Response Tests.

Techniques Modules

These are provided to allow you to explore common neuroscience techniques. Think of them as virtual field trips. They also include short Tests.

Discussions

In each module, I will provide a discussion topic that you will discuss with your group. I expect you to first try to answer the question and then make comments on other's answers in a respectful way. We will then go over the discussion topic and any other questions you have in office hour zoom meetings.

Tests

These are to be taken once and will help unlock the next week's module. They contribute more to your grade and will prepare you for the types of questions in the exams. They will focus primarily on the readings.

Grading

Your grade will be based on the point distribution below.
There will be NO midterms. Instead, there will be weekly tests and biweekly free response tests.
The Final will be a take home essay question.

Table of Grade Contributions

Assignment	Number	Contribution to Grade	Rule
Surveys + Practice Tests	12	10%	worst score will be dropped
Tests	12	20%	worst score will be dropped
Discussions	5	15%	
Free Response Tests	5	30%	
Final Exam	1	25%	

Office Hours

Office hour zoom meetings will be every Tuesday from 11am to noon. Some will serve as follow up for discussion assignments, and all will offer a chance to ask any questions. As an asynchronous web-based course, participation is entirely voluntary, but I hope the personal contact will help consolidate the material. Passcode: S**ynapse**
In addition, you can schedule a personal zoom meeting with me by emailing me: pwash@uoregon.edu
Communicating with Prof. Washbourne

Professional Conduct

You are expected to follow the student conduct code; academic dishonesty includes cheating, plagiarizing or knowingly supplying false information. If you are aware of academic dishonesty occurring, please contact me.

Schedule

Although the goal of this online course is to maximize schedule flexibility, the amount of content makes it imperative to work through the material at a steady pace. For this reason, the Chapter materials are made available in a biweekly sequence. By completing the tests and the discussion, you will be able to move on to the next module. The techniques modules have less of a time constraint: you can work on that material whenever you want during the five week period.