

BI 353 – Sensory Physiology

Winter 2008 Syllabus

Instructor: **Dr. Elizabeth (Liz) Whitchurch**

Lecture: MWF 2:00 - 2:50; 16 Pacific Hall (CRN: 25427, 4 credits)

Discussion Sections: Tuesdays 11:00 – 11:50 or 12:00 – 12:50; 111 Huestis Hall.

Office Hours: Monday 3:15-4:15, Tuesday 1:15-2:15, (& by appointment); 228A Huestis Hall.

Email: ewhitchu@uoregon.edu

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Graduate Teaching Assistant: **Ms. Kathryn (Kat) McCormick**

Office Hours: Fridays 1:00 – 1:50 (& by appointment)

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Phone: 346-4551

Text: Kandel ER, Schwartz JH, and Jessell TM. *Principles of Neural Science* (4th ed.). New York: McGraw-Hill, 2000.

Course Goals

There are 3 primary goals for this course:

- **Concepts:** Students will come away from this course with a firm understanding of how each primary sensory system translates physical energy from the environment into a neural signal. Students will also be exposed to how these peripheral neural signals are processed in the mammalian brain and eventually result in perceptions leading to action. We will cover at least three sensory systems in great detail: Somatosensation, audition, and vision.
- **Skills:** This course is designed for Biology majors and students who plan to go on in careers rooted in the biological sciences. Success in this world after graduation will hinge on the ability to communicate. Whether your next step is graduate school, medical school, a career in education, or in private industry and business, undoubtedly you will be asked to verbally present your thoughts and findings in an organized and understandable manner. By the end of this course, students will have a conceptual understanding of what comprises an effective scientific presentation, and be able to logically present original research data to their peers.
- **Scholarship:** Why do we spend our time and money at University? In the end, what skills must we obtain to optimize our chances for economic and social advancement? What can one class near the end of this experience do to help? This course is fundamentally organized to exercise your skills as a scholar: your ability to actively engage in the learning process, evaluate and retain the information presented to you, and finally utilize it in a way that conveys understanding and original thought. A scholarly perspective is fully transferable to *any* productive area of society, and this class will provide ample opportunity for you to exercise it.

Course Format

- **Lectures:** Assigned readings and surveys will be completed by 11:59 pm the night before the lecture. Because this relatively expensive text-book is required, it will be used to the fullest extent possible. Online surveys associated with the daily reading will be available on the blackboard site and must be completed by the deadline (again, 11:59 pm, the night before the lecture) for a participation grade. Surveys will function on two levels: 1.) Students will be given a framework within which to interpret the main ideas from the reading, and 2.) Student responses will illuminate the more difficult topics and I will focus on these during the in-class lectures. As an instructor, my goal is to provide information that can not be easily obtained by simply reading the text. Therefore, lectures will generally be a mix of explanations of the more complicated topics and information supplementary to the text in an effort to expand and/or illustrate the main points. Sometimes, we will be using clickers to evaluate general understanding, so students should be prepared to actively participate in lecture activities on any given day. These activities will be incorporated into the participation grade. Clickers will be addressed in greater detail on the first day (January 7, 2008).
- **Discussion Sections:** Students will be responsible for presenting primary literature summaries. Groups will be assigned on the first day of discussion sections (Jan 8), and in-class time will be given for group organization and decision making. All articles will be made available on the course blackboard site. Each group will be assigned a paper from the course selection and be responsible for leading the discussion on that paper sometime during the term. All students not in charge of presenting that day will read each paper and prepare 2 questions before class. Questions can range from technical to philosophical in nature, and they should be purposefully constructed to be brought up during the presentation. The questions will be turned in to Kat at the end of class that day for a participation grade. Students will also evaluate their peer's presentations using a specially designed rubric. Student evaluations will be anonymous, unless the evaluator prefers to identify himself/herself. All evaluations will be made available to the presenters within one week of the presentation.

Students with disabilities: The University of Oregon is working to create inclusive learning environments. If there are aspects of the instruction or design of this course that result in barriers to your participation, please notify me as soon as possible. You are also welcome to contact Disability Services in 164 Oregon Hall at 346-1155 or disabsrv@uoregon.edu.

Grades

- **Participation:** Students should plan on reading the assigned text sections and answering the associated on-line surveys by 11:59 pm the night before the lecture on that material. Early completion of these surveys is allowed and encouraged. Surveys will be posted to the blackboard site at least 1 week ahead of time, and at precisely 12:00 AM the morning of the lecture, they will become unavailable. Students will be expected to answer the surveys to the best of their abilities, and will receive full credit for every submission as long as the answers are reasonable, in their own words (not copied from book), and unique from their peers. This activity is very important for the success of the class, so please plan to give it a fair amount of your attention. Students will also earn participation points for taking part in the lecture activities. To earn full credit for lecture participation, students must simply attend class and respond reasonably to the posed questions. Finally, there is a discussion participation grade. To earn full credit on this, thoughtful questions and completed rubrics from that day's presentation must be handed to Kat before leaving class each Tuesday. This requires having read and contemplated the material before the discussion section begins.
- **Exams:** Exams 1, 2, and 3 will be worth 15%, 25%, and 25% of the final grade, respectively. The 3rd exam (scheduled during finals week) will not be cumulative. Keys to each exam will be posted on the blackboard site within 1 week of the exam date. Please check your graded exam with the key and be sure to see Kat or Liz if you have questions within 2 weeks of the exam date. Points brought up after 2 weeks will not be considered. Early and make-up exams will not be available, except in the direst of circumstances (a.k.a. death). This includes Exam 3 (the final exam).
- **Presentations:** Each discussion section will be broken into 7 groups, and each group will lead a discussion on an original research paper or papers. Papers will be assigned from the course list, available Jan. 8. Groups will work as a team to perfect their presentation of the main ideas from the paper. Presentations should be 35 minutes in length, and the remaining class time will be used for questions and scoring (see below). Total scores for each person will be the sum of an "individual" and "group" score. Individual scores will be determined by the instructors' rubrics and from within-group evaluations (submitted online). Each group will also be scored by their peers, using a specially-designed peer-rubric. Group scores will be the average class response and considered extra credit. Thus, no matter the "individual" score, the "group" score will only improve their grade. This grading scheme will be clarified in class. Because group cooperation is vital for the success of these presentations, students should be sure to practice as a group at least once in preparation. There will be a 10 minute question-and-answer period after the presentation, during which the group will field questions from their peers (and maybe some from Liz and Kat). These can and should include the questions prepared ahead of time as well as those thought of "on the spot". The last 5 minutes of class will be used to complete the rubric scoring.

Evaluation	
Component	Percent of Grade
Participation	15%
Reading surveys (5%)	
Lecture participation (4%)	
Discussion participation (4%)	
Exams	65%
Exam 1 (15%)	
Exam 2 (25%)	
Exam 3 (25%)	
Presentation	20%

Course Policies

- Students will make every effort to earn a letter grade or a pass/no-pass grade during the Winter 2008 term, as 'I' and 'Y' grades will not generally be assigned. This policy will be flexible only under the most extraordinary circumstances. Those who wish to withdraw from the course without receiving a 'W' must do so before January 14, 2008. The absolute last day to drop this class or change from Graded to P/N is February 24, 2008 (as posted by the UO Registrar Office).
- The participation portion of the grade is designed to indirectly discourage you from missing or being late for class. Missed participation points may not be made up; this includes discussion sections. See me (Liz) if there is a problem with this.
- Exam and Presentation grades will be posted on the blackboard site within 1 week of the exam/presentation date. Participation grades will be posted and updated after each exam, unless otherwise stated in class.
- If you find yourself having difficulties that are interfering with your ability to do well in this class, please talk to either me (Liz) or Kat. We may be able to refer you to someone for help or make special arrangements if the need is real and you have done your best to deal with the situation in a timely manner.
- We as instructors will work hard to make this course an effective and safe learning environment. We welcome your suggestions anytime via email or at office-hours. In addition to the traditional end-of-term student evaluations, we will also provide a means for your feedback to reach us anonymously during the 4th or 5th week of class. We ask in return that you arrive on time and stay until class is over without making unnecessary noise that could distract your classmates.
- Be reminded that academic dishonesty (this includes cheating, plagiarism, and knowingly supplying false information) will not be tolerated, and sanctions for such offenses will be a lowering of the final grade or failure.
- Finally, we promise to respect you as students and as individuals, and ask that you return that respect to us and your classmates.