This is a WRITING COMPONENT COURSE

This course carries the Writing Flag. Writing Flag Courses are designed to give students experience with writing in an academic discipline. In this class, you can expect to write regularly during the semester, complete substantial writing projects, and receive feedback from your instructors to help you improve your writing. You will also have the opportunity to revise many assignments. All revisions must be turned in within one week of original due date. You will read, discuss, and critique the work of others, including your fellow students. You should expect most (60%) of your grade to come from your written work. The rest of your grade will come from class discussion, class presentations, and your critiques. Assignments receive lower grades if submitted late. Non-participation in class discussion (C) or absences (F) also receive lower grades. The four lowest class discussion grades will be dropped. This Writing Flag Class meets the Core Communications objectives of Critical Thinking, Communication, Teamwork, and Personal Responsibility, established by the Texas Higher Education Coordinating Board.

Meeting Time, Place: GDC 2.210 5-6:30 pm Monday, Wednesday
Faculty Instructor: George D. Bittner, PAT 321, 512-923-3735 (cell), 512-346-4392 (home).
bittner@austin.utexas.edu
Research interests: Biophysics of synaptic plasticity, plasmalemmal repair, nerve regeneration and nerve/glial interactions.

Graduate TA: Cameron Ghergherehchi, PAT 325 936-366-9102 (cell), cameronlgh@gmail.com
Research interests: Nerve regeneration, neuronal plasticities

Undergraduate TA: Sara A Vargas, PAT 322, 512-507, 2942 (cell), vargasmsara@utexas.edu
Research interests: Nerve regeneration, neuronal plasticities

Grading: 40% Class Presentations and 60% written analyses of original journal articles and a term paper consisting of an article for Journal of Neuroscience that you write on results you have (presumably) obtained on an important unanswered question on peripheral or spinal repair by PEG-fusion. Grading will be on letter grade A – F scale. This course will almost-certainly require more time and effort than the average UT course, especially the first 2 months. No final exam. Please note that “The University of Texas provides upon request appropriate academic accommodations for qualified students with disabilities. For information, contact the Office of the Dean of Students at 471-6259, 471-6441 TTY.”
Learning Objectives: Working knowledge of developmental, molecular, cellular, systems, and behavioral physiology of nerve regeneration in invertebrates and vertebrates, especially peripheral nerve regeneration in mammals or repair of plasmalemmal damage… and Critical Thinking, Good English Communication, Teamwork, and Personal Responsibility. In this course, you need synthesize/utilize concepts and data from many sub-disciplines in Biology, Chemistry, Physics, and Mathematics.

Required Readings: Original papers assigned each week. Writing assignments due weekly.

Required text: Warriner: English Grammar and Composition

Within ~6 weeks (October 2nd) of Introductory Lectures and Readings from original papers, in consultation with the Instructors, students will chose a topic of their interest for a 20-30 page term paper on
a problem of current unresolved research on Repair of axons by PEG-fusion after complete transection or ablation of a segment of a peripheral nerve or spinal cord in an adult mammal. The paper should emphasize basic science mechanisms including glial or immune responses, but it can include some applied research to translate PEG-fusion for clinical use. The paper should be double spaced, 1 inch margins, Times New Roman 12 font type. All formatting and references should be cited in style of J. Neuroscience for a full length paper according to their “Instructions to Authors” that you would submit to that journal (if you only had the data you present in the paper!!).

Complete draft due by 9am Nov 11th, Final version due by 9am Nov 18th.

Weekly topics and activities

Students work individually or in teams of two or three to read and critique (written and verbal) original papers with feedback from instructor and other students. If instructions are not clearly understood by you, email or call instructor or TAs for clarification. Clarifications given to anyone will be announced by Canvas and/or emailed to all students.

<table>
<thead>
<tr>
<th>Week #</th>
<th>Dates</th>
<th>Activities, Topics</th>
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<tbody>
<tr>
<td>#1</td>
<td>Aug 28</td>
<td>Overview of Structure and Function of Neurons in Vertebrates and Invertebrates</td>
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<tr>
<td>#2</td>
<td>Sept 4</td>
<td>Repair of plasmalemmal damage. Axonal transport. Wallerian degeneration</td>
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<tr>
<td>#3-4</td>
<td>Sept 9-11</td>
<td>Degeneration and regeneration of transected CNS vs peripheral axons: anatomy, physiology, molecular mechanisms and behavioral recovery</td>
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<tr>
<td>#5-9</td>
<td>Sept 16 – Oct 1</td>
<td>Axonal regeneration and survival in invertebrates. Recent advances to enhance nerve regeneration in mammals: antibodies to inhibitory proteins, trophic factors, nerve growth guides, stem cells, microsutures and tissue glues, polyethylene glycol (PEG)-fusion. Students choose topics for term paper and submit that choice in writing after consultations with instructor and TAs by Oct 2nd</td>
</tr>
<tr>
<td>#10-16</td>
<td>Oct 2-23</td>
<td>Students write complete outline of term paper by Oct 23rd in consultation with instructors at least once each week. Students individually present an original paper that is the most important paper on their term paper topic and briefly describe an unresolved question that they have chosen to design and an original research protocol to try to answer. A detailed description of experimental protocols and animal use will be required as part of the paper.</td>
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<tr>
<td>#16-22</td>
<td>Oct 23- 5-Nov 13</td>
<td>Students meet individually with Instructors at least once each week during class time to discuss progress and problems with their paper and receive feedback on their writing. Complete near final draft due by 9am Nov. 11.</td>
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<tr>
<td>#23</td>
<td>Nov 18</td>
<td>Final Written paper due by 9am</td>
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<tr>
<td>#24-</td>
<td>29 Nov 20- Dec 9</td>
<td>Students present their papers to class (20 min each) with class discussions (5 min each) Students write critiques of three papers  Any revisions to papers MUST be submitted by Dec 15th</td>
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No Final Exam
The University Administration requests that faculty remind you of the following:
Please review the UT Honor Code (or statement of ethics) and an explanation or example of what constitutes plagiarism (Link to University Honor Code: http://catalog.utexas.edu/general-information/the-university/#universitycodeofconduct)

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence


- Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside. Please familiarize yourself with all exit doors of this classroom and building. Remember that the nearest exit door may not be the one you used when entering the building.
- Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class.
- In the event of an evacuation, follow the instruction of faculty or class instructors.
- Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, or Fire Prevention Services office.
- Behavior Concerns Advice Line (BCAL): 512-232-5050
- A link to information regarding emergency evacuation routes and emergency procedures can be found at: www.utexas.edu/emergency

Writing Flag Courses are to be designed as follows according to http://www.utexas.edu/ugs/flags/faculty-resources/teaching/syllabus:

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