Course Syllabus

Course Information

Course Number/Section	NSC 4353 Sections Mon (1U2), Wed (1U1)
Course Title	Neuroscience Laboratory Methods
Term	Summer 2016
Days & Times	Green Hall 4.708 1:00–5:00 PM

Professor Contact Information

Professor	Dr. Steve McWilliams
Office Phone	972-883-6785 (do **NOT** leave messages)
Email Address	***course-related communication, email must be sent through elearning*. I am the 'section instructor'**
Office Location	GR 4.714
Office Hours	MW 12:30-1:00 or by appointment
Other Information	Course Web Site: UTD eLearning

Teaching Assistants

Monday Lab Section 1U2

Aarron Phensy	Office: GR 4.708
12:00-1:00 -or- by appointment	E-mail: ajp059000@utdallas.edu

Wednesday Lab Section 1U1

Jordan Straight	Office: GR 4.708
12:00-1:00 -or- by appointment	E-mail: jls150230@utdallas.edu
Rachel Wilhelm	Office: GR 4.708
12:00-1:00 -or- by appointment	E-mail: rxw142530@utdallas.edu

Course Pre-requisites, Co-requisites, and/or Other Restrictions

NSC 3361 (Behavioral Neuroscience) and either NSC 4352 (Cellular Neuroscience) or NSC 4356 (Neurophysiology). College level writing skills are strongly recommended.

Course Description

This laboratory course is designed to introduce students to scientific writing as used in many scientific journal publications and to expose students to some of the various methods used in the field of neuroscience research. Students will carry out experiments, research existing literature related to such experiments, and write up their data in a scientific journal-style paper, similar to that found in a scientific journal. The course fulfills the advanced writing requirement for Neuroscience majors.

Student Learning Objectives/Outcomes

After completing the course, students should be able to:

- Apply scientific methods to design, conduct and analyze studies using available research methods.
- Locate, concisely summarize, and compare findings from sources in peer-reviewed literature.
- Demonstrate proficiency in writing research reports, in a manner suitable for publication, that include an abstract, introduction, methods, results and discussion sections.
- Demonstrate competence in effectively collaborating with others.
- Students will be able to write using effective technical requirements, including organization, mechanics, and thesis development.
- Students will be able to demonstrate an ability to conduct research, apply source material, discuss general information, and apply logical process when writing.

Required Textbooks and Materials

- Day and Gastel, How to Write and Publish a Scientific Paper, 6th or 7th edition.
- Other readings on ***eLearning:*** Students should print out "Lab Handouts" and bring to class on the days they are to be used. These are posted on the course eLearning web site and will NOT be provided by the instructor.

Suggested Textbooks (But not required!)

- Cargill and O'Connor, Writing Scientific Research Articles, 2nd edition.
- Hofmann, Writing in the Biological Sciences, A Comprehensive Resource for Scientific Communication

Assignments

Exams: Students will complete three exams- The first exam is a partial practicum covering neuroanatomy, and includes fill-in-the-blank, multiple choice, and true/false questions. The second exam is an essay- type short-answer exam covering both behavioral experiments, and includes the open-field experiment as well as the inhibitory avoidance experiment. The third exam is an essay-type short-answer exam covering neurophysiology.

Papers*:* Students will write a total of four typed publication- style journal papers. This will include two drafts as well as a final version paper for each draft. Since revision is such a critical part of writing, students will submit an initial draft for each paper as a way of getting feedback on their writing. This is designed to help students with the writing process. Each paper should include a title, abstract, introduction, materials and methods, results, discussion, and published references. Students should expect to write a minimum of 15 pages cumulative for the two papers with a minimum of 5 pages of revision. However, students often end up writing more than 15 pages by the end of the course.

Students will submit a typed copy of their paper electronically via email directly to the TA for grading and revision on the day due. Once papers are revised, graded, and grades are posted, they will be returned via email. In addition to submitting papers electronically via email, final/revised versions MUST be submitted to Turnitin.

ALL PAPERS MUST BE TYPED AND TURNED IN BY THE DUE DATE. FINAL VERSIONS MUST BE SUBMITTED BY THE DUE DATE USING TURNITIN VIA THE COURSE WEBSITE (eLearning).

SEE BELOW FOR LAB SCHEDULE AND DUE DATES.

SEE BELOW REGARDING POLICY ON LATE WORK.

SEE BELOW REGARDING POLICY ON TURNITIN SUBMISSION.

SEE BELOW REGARDING UTD POLICY ON PLAGIARISM.

NO EXTRA CREDIT WORK OF ANY KIND WILL BE GIVEN.

Grading Policy

Exams (30% of grade): Each of the three exams is worth 10% of your final course grade.

Lab Reports (60% of grade): Each of the two journal-style papers is worth 20% of your final course grade. Each of the two drafts is worth 10% of your final course grade. Student papers are assigned a grade based on a grading rubric that is posted on eLearning and available to students. The grading rubric details all aspects of the paper as well as possible point deductions. Papers are graded for formatting, grammar, comprehension, and content. Papers MUST be typed- papers that are not typed will not be accepted or graded.

Students should expect to spend a good amount of time with the writing process of the course as this type of writing is typically time consuming for most individuals. As such, students should allow themselves enough time to complete and correct their papers prior to the due dates!

SEE BELOW FOR POLICIES CONCERNING LATE WORK.

SEE BELOW REGARDING POLICY ON TURNITIN SUBMISSION.

Participation/Attendance (10% of grade): Attendance and class participation is worth 10% of your final course grade.

SEE BELOW FOR POLICIES CONCERNING ATTENDANCE.

Final Grades: The plus/minus grading system is used in this course. A+ (97–100), A (94<97), A- (90<94), B+ (87<90), B (84<87), B- (80<84), C+ (77<80), C (74<77), C- (70<74), D+ (67<70), D (64<67), D- (60<64), F (< 60).

Course Policies

Make-up exams: Make-up exams are at the discretion of the professor. However, exam one covering neuroanatomy cannot be rescheduled.

Late Work: All papers are due on the dates listed below, unless pre-approved by the instructor.

DRAFTS NOT TURNED IN BY THE DUE DATE WILL NOT BE REVIEWED OR GRADED. FINAL VERSIONS NOT TURNED IN BY THE DUE DATE WILL BE DEDUCTED ONE LETTER GRADE FOR EVERY DAY LATE

(INCLUDING WEEKENDS). FINAL VERSIONS NOT SUBMITTED TO TURNITIN BY THE DATE DUE, WILL BE DEDUCTED ONE LETTER GRADE.

Students insisting they submitted a paper despite the fact that Turnitin shows no submission MUST provide a hard copy of the "digital receipt" that is displayed when submitting a paper as proof of submission.

Class Attendance: Students are expected to attend all lab classes on time. Lab doors open at 2:30- **DON'T BE LATE!** Students are responsible for completing all assigned readings BEFORE coming to class. Excused absences are at the discretion of the instructor. If you know you will miss a class you must notify the instructor in advance of the scheduled class. Two or more unexcused absences will result in a reduction of the final course grade by one letter grade! Coming to lab late or leaving lab early repeatedly will also count as an absence. Students coming to lab late on exam days MUST finish exam at the same time the class is finished. Late students will NOT be allowed extra time to finish an exam unless approved by the instructor.

YOU ARE NOT ALLOWED TO ATTEND ANOTHER LAB SECTION WITHOUT PRIOR APPROVAL FROM BOTH INSTRUCTORS!

UT Dallas Syllabus Policies and Procedures

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). Other than group data, students are NOT allowed to work together and should NOT share their writing with another student. Each student is expected to write his or her on paper. This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective. All suspected forms of cheating, collusion, and plagiarism will be turned over to Judicial Affairs according to UTD policy.

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.

Lab Schedule and Due Dates

Week of	Class Topic	Reading	Due
May 23	Orientation and Course Outline- Writing Requirements for the Course Plagiarism and Collusion What is Scientific Writing and What is a Scientific Paper (AIMRD)	Syllabus Handout Day&Gastel Chpts.1 & 4	
May 30	**No School (on Monday)** Introduction to Neuroanatomy/Sheep Brain Dissections (Students)	Lab Handout	
Jun 6	Introduction to Neuroanatomy/Sheep Brain Dissections (Students)	Lab Handout	**Online certification** **Tetanus shot record**
Jun 13	**Exam I** Neuroanatomy How to Write the Abstract, Introduction, Methods, Results, and Discussion Animal Handling	Day&Gastel Chpts. 9, 10, 11, 12, 13	
Jun 20	**Experiment Behavioral Pharmacology** Open-Field (OF) How to Prepare a Title and Cite References	Lab Handout Day&Gastel Chpts. 7,15	
Jun 27	Discussion on Scientific Writing-Draft issues addressed and questions answered		**OF *Draft* Due**
Jul 4	**No School (on Monday)** Discussion Scientific Writing		***(OF drafts returned)***
Jul 11	**Experiment Arousal Systems and Memory** Part I Inhibitory Avoidance– Training Scientific Writing- Use and Misuse of English, and Avoiding Jargon	Lab Handout Day&Gastel Chpts. 30 and 31	**Final OF Paper Due**
Jul 18	**Experiment Arousal Systems and Memory** Part II Inhibitory Avoidance– Retention Testing	Lab Handout	
Jul 25	**Exam II** Behavioral Pharmacology and Arousal and Memory Electrophysiology Exercise	Lab Handout	**IA *Draft* Due** ***(IA drafts returned later in the week!)***
Aug 1	**Exam III** Electrophysiology		**Final IA Paper Due**
Aug 8	(Monday last day of school!)		

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.