

BSC 481 –Neuroscience - Syllabus
Department of Biological Sciences - Marshall University

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Textbook: **Nicholls et al., From Neuron to Brain 5th ed (Sinauer).**

Other Materials: Handouts to be given in lecture. We will use Blackboard to distribute images or slides from the lectures, supplementary material or exercises, study aids, or additional material you may find interesting or useful. You may want a three ring binder to keep the handouts together.

Computer Requirements: Access to and the ability to print documents from MUOnline and online scientific search engines is required. Access to word processing and presentation software (e.g. Word and PowerPoint) is also required. Official course communication will be through your Marshall email account, it is expected that you will check it regularly.

Lecture: **TR 9:30-10:45 AM, room HH406.**

Course Description:

The fundamentals of cellular and systems neuroscience, with application towards understanding current research and biomedical problems.

Responsibilities: By enrolling in this course, you agree to all policies in this syllabus, and all relevant University policies as outlined in this syllabus and on the Academic Affairs website (www.marshall.edu/academic-affairs, click on “Marshall University Policies”).

Goals:

Most of you have the goal of pursuing a career in some aspect of scientific research, development, or education. As such, we feel that it is important to give you the opportunity to begin to develop those skills necessary and applicable to any of these paths. Neuroscience is one of the largest scientific fields, if not the largest, and the body of literature is expanding at a phenomenal rate. Our primary goal in this course is to provide you with the tools necessary to enter this dynamic and intellectually challenging field. As such, in BSC 680, Current Topics in Neuroscience, we will strive to:

- provide you with a fundamental understanding of cellular and systems neuroscience sufficient for a good understanding of primary neuroscience literature.
- develop your ability to critically read neuroscience literature and synthesize it into you own ideas.
- provide you with a framework to encourage communication and develop your speaking and writing abilities and styles.
- provide the opportunity for you to develop skills with an emphasis on your own personal interests.

Expected Learning Outcomes:

We expect that during this course you will develop skills that will put you well on your way towards being an effective neuroscience researcher and communicator. Fundamental to this is a good basic understanding of cellular and systems neuroscience. Once you have this, you will have the ability to research complex topics and use your knowledge to help you successfully interpret them. We will then ask you to communicate what you learn in the form of written and oral assignments. You will

work with us and your peers to form your own style that meets the criteria of effective communication for each type of writing or speaking we ask you to perform. By the end of this course, we expect that you will have developed the ability to:

- research complex topics and/or concepts in neuroscience.
- read and interpret primary neuroscience publications.
- critically evaluate neuroscience literature.

Assessment:

All assignments in this class are designed with the goal of developing your skills as an effective communicator and evaluator of the neuroscience literature. There will be both written assignments and oral presentations assigned for credit. Details of these assignments will be given to you as the class progresses.

Grading Policy:

Your grade will be based on the scores you receive for a number of assignments, and on your participation in class discussions.

SWIMMY Assignment:	15%
Written Review Paper (cellular neuroscience):	15%
Prelim Exam 1:	15%
Prelim Exam 2:	15%
Final Exam:	25%
Participation:	15%
Total:	100%

We will use this scale to determine final grades: 100 - 90 = A; 89 - 80 = B; 79 - 70 = C; 69 - 60 = D; <59 = F.

We round up if your score is X.5 to X.9. There will be no extra credit or bonus points.

Late assignments will only be accepted with a university approved excuse.

Attendance:

Missed or late assignments can be made up only in the case of a University approved absence. Marshall's policy on excused absences can be found in the academic calendar. It is your responsibility to be familiar with University policy. In cases of inclement weather, the University's policy will again be followed; it can be found on the web at: <http://www.marshall.edu/ucomm/weather.html>

Academic Honesty:

We take scientific integrity very seriously, and will not tolerate any form of dishonest conduct. You are responsible for knowing the University's policies on academic honesty, which can be found in the student handbook or on the web at this location:

http://www.marshall.edu/muonline/Academic_Dishonesty_Policy.pdf

For all assignments, we expect that all references or borrowed material used in your reports or talks are properly cited, and that you work independently. Exceptions to independent work will only be allowed in cases where you are expressly instructed to work in groups. Duplication or improper use of work will not be tolerated. Examples of this include, but are not limited to, use of borrowed material in figures or slides without proper reference, **any duplication** of material between students in talks or written reports, and any incidence of plagiarism as defined by the university (see link above).

Any incidence of dishonest conduct will result in a grade of ZERO for that assignment, and possible failure or dismissal from the course. Every case will also be referred to Academic Affairs for further action. **Students found guilty of academic dishonesty may be placed on academic probation, suspended, or dismissed from the University.**

Other Aspects of Conduct:

We will expect everyone to act in a professional and courteous manner. Disruptive, abusive, or offensive behavior directed at anyone involved in the class will not be tolerated. Cell phones and other communication devices should be turned off or set to silent ring. If you absolutely must answer a phone call, quietly leave the class before doing so. Text messaging is not allowed. Use of computers or personal electronic devices is not allowed, unless their use is directly involved with class activities **and** has been approved by your instructors. If you are late, enter quietly and avoid disturbing the class.

Social Justice:

Absolutely NO student will be discriminated against based on race, ethnicity, sex, age, sexual orientation, social class, abilities, health condition, or religion. Every student is an integral and essential member of this class, and their opinions and discussion will be treated with value and respect.

Students with Disabilities:

Marshall University is committed to equal opportunity in education for all students, including those with physical, learning and psychological disabilities. University policy states that it is the responsibility of students with disabilities to contact the Office of Disabled Student Services (DSS) in Prichard Hall 117, phone 304 696-2271 to provide documentation of their disability. Following this, the DSS Coordinator will send a letter to each of the student's instructors outlining the academic accommodation he/she will need to ensure equality in classroom experiences, outside assignment, testing and grading. The instructor and student will meet to discuss how the accommodation(s) requested will be provided. For more information, please visit <http://www.marshall.edu/disabled> or contact Disabled Student Services Office at Prichard Hall 11, phone 304-696-2271.

Tentative Schedule*

Week of

General Topic
