

COURSE INSTRUCTOR AND CONTACT INFORMATION

Instructor: Lora Becker, Ph.D.

Office: 122D Hyde Hall

E-mail: LB47@evansville.edu

Office phone: 488-2532

Office hours: Monday, Wednesday, Friday 2 – 3; Thursday 8 – 11, 1 – 4

COURSE DETAILS**REQUIRED TEXT:**

Neurons in Action V2. Moore & Stuart. 2007

Neuroscience 4th Ed. Purves, Augustine, Fitzpatrick, Hall, LaMantia, McNamara, & White. 2008

COURSE DESCRIPTION: Involves the advanced study of neuroscience topics with focus on a current review of the literature. Topics will cover Neuropharmacology, Neurotransmitters and Drug Action, Genes and Behavior, Action Potential, Anatomy of the nervous system, Generation and formation of the nervous system and diseases of the nervous system.

RELEVANT UNIVERSITY OF EVANSVILLE LEARNING OBJECTIVES FOR PSYC 457 ADVANCED NEUROSCIENCE

- You will have the opportunity to gain in depth factual knowledge about the history, various theories and applications of Neuroscience through lecture, reading, and labs. (Objective 1)
- You will have the opportunity to master communication, organizational and critical thinking skills when preparing the reading critiques, paper and written exams. (Objective 6)

PSYCHOLOGY DEGREE REQUIREMENT: This course is one of the 300-400 level options for the bachelors of science degree in Psychology.

NEUROSCIENCE DEGREE REQUIREMENT: This course is required for the bachelors of science degree in Neuroscience.

COURSE REQUIREMENTS AND EVALUATION

CLASS ATTENDANCE: Attendance is not required; I assume we all want to be here! However, if life hands you a nasty situation or you choose to take a 'personal health day' you will soon find that you have missed a lot of information and will have a disadvantage on the exams. Students are responsible for obtaining access to material missed while absent from class.

NEURONS IN ACTION LABS: Labs due dates are found on the course calendar. As you work on the assigned labs, print out your findings (charts) and answer the question(s) associated with each section. Each lab is worth 10 points. Labs are worth 10% of your course grade.

EXAMS: Exams will cover information from the textbook, lab and paper presentations for a group of topics outlined in the course calendar. Each of the 4 exams will consist of 8 short answer (5 points) and 4 essay questions (10 points) totaling 80 points. Exams are worth 35% of your total class grade.

ARTICLE PRESENTATIONS: The text copyright is 2008, which means the material is more than two years old! Neuroscience is a fast moving field. You are to present three articles on recent (2008 or 2009) neuroscience findings. Topic selection will be on January 23, along with your paper topic presentation. The main goal is add on new findings, not to overview an area. Do not present a review article! Be able to FULLY explain the article to the class on your assigned day. This means that you may have to study certain concepts within the paper before you present. Start on your article search **EARLY**, these will be inter-library loan items! Most of the articles will be found in journal suggested for your term paper. Paper presentations are worth 10 points each totaling 10% of your course grade. You will be graded on your ability to understand and explain the material in the paper you present. Also, you must link the paper to the text topic covered in class.

TERM PAPER: This paper assignment is made to assess your ability to **critically evaluate** the research in a given neuroscience area of study. Please select a paper topic and be prepared to present your paper outline on January 23. An annotated bibliography is due on February 13. A grading rubric will be provided to guide your progress on the paper's goals and format. **Your paper will be due by MIDNIGHT on Wednesday, April 8.** Turn papers into Turnitin.com with the class number 2523005 and password Purves. Hand in sources used in the paper on the same day. Consult me if you are using a book as a primary source. Papers that are late are NOT accepted. Only extreme cases may warrant an extension (hospitalization, complete computer meltdown). The paper is 20% of your total class grade.

TERM PAPER REQUIREMENTS:

- ✓ 13-15 full pages of text, one-inch margins, Times New Roman 12 pt font only.
- ✓ Title page and reference page
- ✓ APA format, 5th edition (UE Library <http://libraries.evansville.edu/style/info.html>)
- ✓ Papers require clarity of writing, presence of personal ideas, critique of research findings, and presence of correct, factual information in the paper
- ✓ Acknowledge anyone who assisted with, reviewed or edited the paper (Writing Center, Roommate, Parent, Sibling...etc.)
- ✓ Reference at least ten primary sources. Other references beyond these may be used but are not necessary to meet grading requirements. (you may find you use much more!)
- ✓ Most of the journals you will use do not have a full-text option. You will need to use inter-library loan (ILL). Consult a librarian about this process.
- ✓ **Suggested Journals:** Archives of General Psychiatry, Behavioral Neuroscience, Brain Research, Journal of Neuroscience, Nature Neuroscience, Neurology, Physiology Biochemistry and Behavior, Physiology and Behavior, Science, Nature, Developmental Brain Research and the like.

COMPREHENSIVE FINAL EXAM is Tuesday, May 5, 2009 at 12:30. This exam will consist of short answer and essay questions from material across the entire semester. You will select from 5 of the 8 short answer questions (5 points) and 3 of the 5 essay questions (15 points) for a total of 70 points. The final is worth 25% of your final grade.

GRADE CALCULATION

$((\text{Exams}/320)*.35)+((\text{Labs}/140)*.10)+((\text{Articles}/30)*.10)+((\text{Paper}/5)*0.20)+((\text{Final}/70)*.25)$

GRADE DISTRIBUTION

95 – 100	A	83 – 86	B	73 – 76	C	63 – 66	D
90 – 94	A-	80 – 82	B-	70 – 72	C-	60 – 62	D-
87 – 89	B+	77 – 79	C+	67 – 69	D+	0 – 59	F

COURSE CALENDAR

Date	Topic (Pruves)[Neuron]{Article}	Date	Topic (Pruves)[Neuron]{Article}
1/7	Course Overview (Ch 1) discussion	3/9	Construction of Circuits (23) {4}
1/9	(Ch 1) Article discussion [N1-8]	3/11	Construction of Circuits (23) {5}
1/12	Electrical Signals (2) [N9-15]	3/13	Article Review {6}{7}{8}{9}{10}
1/14	Voltage-Dependent (3) [N17-21]	3/16	Modification of Circuits (24) {11}
1/19	MARTIN LUTHER KING JR. DAY	3/20	Modification of Circuits (24) {12}
1/21	Channels& Transporters (4)[N23-28]	3/21	Repair and Regeneration (25) {13}
1/23	Channels& Transporters (4)	3/23	Repair and Regeneration (25) {14}
1/23	PAPER TOPIC CHECK/ ARTICLE SELECTION LAST DAY TO DROP W/O ‘W’	3/25	Article Review {15}{16}{17}{18}
1/26	EXAM 1 (1, 2, 3, 4)	3/27	Catch up/ Review day
1/28	Synaptic Transmission (5) [N29-34]	3/27	LAST DAY TO DROP WITH ‘W’
1/30	Synaptic Transmission (5) [N35-41]	3/30	EXAM 3 (22, 23, 24, 25)
2/2	Synaptic Transmission (5) [N43-49]	4/1	Association Cortices (26) {19}
2/4	NT and Receptors (6) [N57-61]	4/3	Association Cortices (26) {20}
2/6	NT and Receptors (6) [N63-66]	4/6	Emotions (29) {21}{22}
2/9	Molecular Signaling (7) [N67-71]	4/8	Article Review {23}{24}{25}{26}
2/11	Molecular Signaling (7) [N73-78]	4/8	PAPERS DUE AT MIDNIGHT
2/13	Synaptic Plasticity (8) [N79-84]	4/10 – 4/13	EASTER BREAK
2/13	ANOTATED BIBLYOGRAPHY	CRICK LECTURE 4:00PM KC 100	
2/16	Synaptic Plasticity (8)[N85-104]	4/15	Pain (10) {24} {27}
2/18	Catch up/ Review day	4/17	Memory (31) {28}
CRICK LECTURE 4:00PM KC 100		4/20	Memory (31) {29}
2/20	EXAM 2 (5, 6, 7, 8)	4/22	Article Review {30}{31}{32}{33}
2/23	Early Brian Development (22) {1}	4/24	Catch up/ Review day
2/25	Early Brain Development (22) {2}	4/27	EXAM 4
2/27	Construction of Circuits (23) {3}	4/29	READING/STUDY DAY
2/28 – 3/8	SPRING BREAK		
		TUESDAY, MAY 5	
		FINAL EXAM 12:30 P.M. SB 75	

NOTICE: Material and dates listed in this syllabus may be changed if the instructor and students agree that the change is in the best interest of the students.

Course Requirement Related Thoughts:

- As your instructor, it is *my* responsibility to present learning opportunities through the course syllabus, lectures, labs, class discussions, assignments, and in-class and out-of-class exercises.
 - It is *your* responsibility to do the learning by completing the readings, by attending class, and by participating in class discussions and exercises.
 - I cannot do the learning for you – all I can do is to try to guide you toward that information.
- As your instructor, it is my responsibility to respect your abilities to learn.
 - All of you are capable of reading, and of taking in information from the textbook. Therefore, merely rehashing the text would be an insult to your abilities.
 - My job, therefore, is to explore the topics that the text mentions in other ways. To extend what you learned from the book to other related ideas.
 - *To do this, you must read the text BEFORE class, so that you can understand the relationships between what we are discussing and what you have read.*
- There is a reason behind exams. The reason is not to give you a grade. It is to give you a means of measuring how well you are achieving the primary goal of any course – *mastery of the course content and skills.*
 - If you find you are not mastering the material and skills, you are encouraged to reflect on how you study and prepare for each class. I welcome a dialogue on what you discover and may be able to assist you in finding resources on campus that will improve your performance.

WITHDRAWAL POLICIES A course may be dropped without a designated grade during the first two weeks of a term of the regular academic year. From the third to the eleventh weeks, a grade of "W" is assigned. After the eleventh week, a grade of "F" is assigned. Discontinuance of attendance does not automatically constitute a withdrawal. Students failing to file a proper drop/add form by the appropriate deadline must complete classes for which they are registered or received a grade of "F". Withdrawal from a course after the deadline requires petition to and approval of the Admissions and Standards Committee and/or the Vice President of Academic Affairs. **Last day to drop without a grade for Spring 2009 is Friday, January 16.**
Last day to drop and receive a "W" for Spring 2009 is Friday, March 27.

INCOMPLETE GRADE POLICY: All coursework is to be completed within the semester it is attempted. If an emergency prevents a student from completing some portion of the required assignments, as instructor may give an 'I' or incomplete grade only if the following circumstances are met:

1. The student's other work in the course could earn a passing grade.
2. The outstanding task can be completed without further class attendance.

Outstanding course work normally should be completed within six weeks of the class ending, but the instructor may allow up to one year from the end of the term for which the 'I' grade is granted. It is the student's responsibility to have this deficiency removed within the agreed upon time period or whining one year, whichever is less. If no grade change has been submitted by the instructor after the maximum one year grace period, the registrar is authorized to change all grades of 'I' to 'F'.

UNIVERSITY OF EVANSVILLE ACADEMIC HONOR CODE

"I understand that any work which I submit for course credit will imply that I have adhered to the Academic Honor Code: I will neither give nor receive unauthorized aid nor will I tolerate an environment which condones the use of unauthorized aid." Failure to adhere to this code will result in receiving an "F" for the course.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

It is the policy of the University of Evansville to make reasonable accommodations for students with properly documented disabilities. Written notification to faculty from the Office of Counseling and Health Education is required for any academic accommodations. If you are eligible to receive an accommodation and would like to request it for this course, please discuss it with me and allow two week notice. Otherwise, it is not guaranteed that the accommodation can be received on a timely basis. If you have questions about services for students with disabilities or procedures for requesting services, you may contact the Office of Counseling and Health Education at 488-2663.