

PSY 209, Section 101: BRAIN AND BEHAVIOR  
Summer 2008 – Michigan State University  
Prerequisite: PSY 101 or equivalent

### Course syllabus

**Instructor:** Paul E. Engelhardt, M.A., B.S.  
**Office:** 213 Psychology Bldg.  
**Phone:** (517) 355-2259  
**E-mail:** paul@eyelab.msu.edu or engelh17@msu.edu (Put PSY209 in the subject line)  
**Office hours:** Wednesday 1:10pm-2:10pm; and by appointment.  
**Time and location:** MTuW from 10:20am to 12:10pm in room #120 Psychology Building

### Course Materials

**Textbook:** Breedlove, S. M., Rosenzweig, M. R., & Watson, N. V. (2007). *Biological Psychology: An Introduction to Behavioral, Cognitive, and Clinical Neuroscience*. Sunderland, Massachusetts: Sinauer Associates.

Your textbook covers more topics than will be possible to cover in lecture, but I strongly recommended that you keep up with reading assignments. Reading before lecture may cut down on the amount of notes you need to take during lecture, and can alert you to topics that you may want to ask questions about in class. In addition, being present for and learning the lecture material will be as important to your success in the class as reading the textbook.

**Webpage:** A course webpage on ANGEL will be maintained where class announcements and materials will be posted.

### Course Content

**Course description:** This course will cover topics related to the relationship between neuroscience and behavior including development, perception, motor control, emotion, learning, and memory. We will focus on current theories and experimental research in biological psychology.

**Course objectives:** When you finish this course you should be able to:

- Explain basic principles of anatomy and physiology of the nervous system. Explain current theories of neural development, perception, regulation of internal states, emotion, learning, and memory.
  - Given the name of a biological psychology theory and a direct question about one of its terms, elements, or principles, you should be able to give an informed answer based on the text or class explanation.
  - Given an example of a biological psychology phenomenon, you will be able to correctly name the phenomenon, recognize the principles associated with it, and give the current theoretical explanation of the phenomenon.
- Describe research findings in biological psychology relating to neural development, perception, regulation of internal states, emotion, learning, and memory.

- Given a brief description of an experiment, you should be able to identify the variables in the experiment, determine what the conclusions of the experiment should be, and how the experiment contributes to current knowledge in biological psychology.

### **Methods of learning the course material**

**Study strategies:** There are many different study strategies that have been supported by cognitive psychology research. However, one underlying theme suggests that effective learning requires that you be *actively involved* in studying the material. Answering the conceptual questions in your textbook is one way of doing this, and another is writing practice exam questions.

**Study time estimate:** In general, the rule of thumb for college courses is to spend 2 hours outside of class studying for every hour spent in class. Since this class meets for almost 6 hours a week, you should plan on spending 10 - 12 hours studying outside of class each week. This is a summer course, so it follows a compressed schedule, making it all the more important that you stay on top of reading and studying.

### **Classroom code of conduct:**

**Class participation:** Student participation is an important part of learning. It is beneficial to the entire class for you to ask questions and make comments which relate to the material. At no time is it acceptable for a student to be embarrassed, intimidated, or mistreated in this class. Mutual respect is expected in the classroom as well as in any communication (mail, email, telephone, etc.) between students, and between students and the instructor.

In general, I would appreciate it if you would turn off your cell phone and try to be on time because these things tend to be disruptive. Also, if you must leave early, please sit near the door and leave as quietly as possible.

**Academic Integrity:** Article 2.3.3 of the Academic Freedom Report ([www.vps.msu.edu/SpLife/](http://www.vps.msu.edu/SpLife/)) states that "The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards." In addition, the Psychology Department adheres to the policies on academic honesty as specified in General Student Regulations 1.0, *Protection of Scholarship and Grades*; the all-University Policy on *Integrity of Scholarship and Grades*; and Ordinance 17.00, Examinations. (See *Spartan Life: Student Handbook and Resource Guide* at [www.vps.msu.edu/SpLife/index.htm](http://www.vps.msu.edu/SpLife/index.htm) and/or the MSU Web site at [www.msu.edu](http://www.msu.edu).)

### **You are expected to complete all course assignments, including quizzes and exams on your own.**

Examples of cheating:

1. Assisting anyone or being assisted by anyone on an exam
2. Using the textbook, notes, or other unauthorized aides during an exam.

If you violate these rules, you may receive a penalty including a zero for the exam, or a zero for the course (See also [www.msu.edu/unit/ombud/honestylinks.html](http://www.msu.edu/unit/ombud/honestylinks.html) ).

**Evaluation:**

Your grade for the class will be based on 3 exams, and 6 quizzes.

Assignment	Total Points	Percentage of Grade
Exam 1: <i>Chapters 1-7</i>	100	25%
Exam 2: <i>Chapters 8-14</i>	100	25%
Exam 3: <i>Chapters 15-19</i>	100	25%
Quizzes: <i>average of quizzes 1-6</i>	100	25%
<b>Totals</b>	400	100%

**Exams:** Exams will consist of multiple choice and short answer questions. The exams will cover the material in the textbook and from lectures. Note that the three exams account for the majority of your total grade. Exams will be administered promptly at 10:20 on the exam date, and you must have a photo ID, either MSU student ID card or driver’s license. If you arrive after other students have finished, then you will not be allowed to take the exam.

**Exam make-up policy:** There are two circumstances under which you may take a makeup exam: (1) a family, medical, or personal emergency, and (2) an inflexible conflict that you know about in advance (for a list of inflexible conflicts, see University-Addressed Absences section of the Ombudsman webpage at [www.msu.edu/unit/ombud/excuses.html](http://www.msu.edu/unit/ombud/excuses.html)). Vacation plans and conflicts with job schedules are not considered inflexible conflicts.

In the event of an inflexible conflict, please email me at least a week before the normal exam date and identify the conflict. In the event of an unexpected emergency, please contact me as soon as you learn that you will be unable to attend the exam and be prepared to document the cause of your absence (e.g. police report of incarceration, or Olin report of medical emergency). In either circumstance, you may take the exam at another time on the exam day, or at the soonest possible date thereafter. Make-up exams will likely consist entirely of essay questions. If you have an unexcused absence you will get a score of zero on the exam.

**Quizzes:** Quizzes will consist of short answer, multiple choice, or fill in the blank questions. The quizzes will cover a short list of terms or figures from the textbook. The six quizzes make up 25% of your total grade. Quizzes will be given in class at 10:20 on Wednesday of every week.

GPA	%
4.0	90-100
3.5	85-89
3.0	80-84
2.5	75-79
2.0	70-74
1.5	65-69
1	60-64
0	0-59

**Extra Credit: Research Participation or in class presentation:**

1. Research participation gives you a first hand look at psychology research that is currently being conducted at Michigan State University. You can earn up to 10 extra credit points by participating in 5 credits (2 points per credit) worth of psychology experiments. You can sign up for experiments through the MSU Psychology website, and 1 credit is worth 30 minutes of experiment time. Research participation is available until 6/26/2008.

2. If you choose not to participate in research, then you can earn 10 extra credit points by presenting at two of the three scheduled student-led presentations. For all presentations, you must clear your topic with me ahead of time. Your presentation should be ~10 – 12 minutes, and cover a pre-specified list of information. An example for the 1<sup>st</sup> presentation is given below.

**Receptor-Drug presentation:**

1. Classification?
2. How does it enter the blood-stream, and cross the BBB?
3. What type of receptor does it affect?
  - a. Does the drug mimic an endogenous chemical?
4. What effect does it produce on post-synaptic cell?
  - a. Efficacy?
  - b. Addictive?
5. Is it used to treat disease?
  - a. Are there any side effects?

\*\*Note that the purpose of this exercise is to further your understanding of neurotransmitters, receptors, and synapses. Therefore, emphasis should be placed on 3 and 4 in the list above.

## Course Calendar:

Date	Content	In-class
M 5/12	Chapter 1 – Introduction: scope & outlook	
Tu 5/13	Chapter 2 – Neuroanatomy	
W 5/14	Chapter 3 – Neurophysiology	Quiz 1
M 5/19	Chapter 4 – Neurochemistry	Student pres. (drug/receptor)
Tu 5/20	Chapter 5 – Hormones	
W 5/21	Chapters 6 & 7 – Evolution & development	Quiz 2
M 5/26	<b>Exam 1</b>	
Tu 5/27	Chapter 8 – Perception	
W 5/28	Chapter 9 – Hearing, taste, smell	Quiz 3
M 6/2	Chapters 10 & 11 – Vision & motor control	Student pres. (visual illusions)
Tu 6/3	Chapter 12 – Sex behavior/differentiation	
W 6/4	Chapter 13 – Internal states	Quiz 4
M 6/9	Chapter 14 – Biological rhythms	
Tu 6/10	<b>Exam 2</b>	
W 6/11	Chapter 15 – Emotion, Stress	Quiz 5
M 6/16	Chapter 16 - Psychopathology	Student pres. (disorders)
Tu 6/17	Chapter 17 – Learning & memory	
W 6/18	Chapter 18 – Learning & memory	Quiz 6
M 6/23	Chapter 19 – Language & cognition	
Tu 6/24	Class wrap-up (evaluations and review)	
W 6/25	<b>Exam 3</b>	

NOTE: The above schedule and procedures in this course are subject to change in the event of extenuating circumstances. You are responsible for keeping informed of any changes to this syllabus that are announced in class and/or on the course website on ANGEL.

**Attendance:** If your name does not appear on the official class list for this course, you may not attend this class. If you fail to attend the first four class sessions or class by the fifth day of the semester, whichever occurs first, you may be dropped from the course.

**Accommodations for Students with Disabilities:** Students with disabilities should contact the Resource Center for Persons with Disabilities to establish reasonable accommodations. For an appointment with a disability specialist, call 353-9642 (voice), 355-1293 (TTY), or visit [MyProfile.rcpd.msu.edu](http://MyProfile.rcpd.msu.edu).