Psych 310  Brain & Behavior
Course Syllabus for Fall 2010

Instructor: Dr. Alison Morris
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Course web page: WebCT

Office hours: Tuesday and Thursday 1:10-2:30 p.m.
Class meetings: T-TH 3:40-4:55 p.m.

Prereq: Psych 101; Biol 109 or 201 or Zool 155.

Required text: Kalat, James W. Biological Psychology, 10th ed., Wadsworth Publishing

NOTE: Using a previous edition of the text is NOT recommended! Neuroscience is constantly advancing, so there have been many changes to the contents of the textbook as well as to the organization since the 9th edition.

Course description

This is an introductory course in Biological Psychology. During this course we will study relationships between behavior and underlying physiological processes – how the brain produces behavior, and how behavior influences the brain. We will begin with a review of the basic structures of the brain as well as the structure and physiology of neurons and neuronal circuits. Following this will be a discussion of neurotransmitters and drug effects and then brain development. The remainder of the course will focus on brain systems and processes associated with a variety of behaviors including sensation and perception, movement, sleep, emotion, memory, and language.

Both behavior and the brain are interesting (and complex) topics, and it is possible to learn a great deal in this course. Although there will be some overlap between material discussed in lectures and the textbook and readings, class time will often be used to discuss material not specifically covered in the book or to present material from the textbook in a different way – using different sets of illustrations, videos, and animations. To get the most out of each class, you should read the relevant portions of the text (and the supplemental readings) ahead of class time; this will allow you to gain some familiarity with new terms and concepts that will be referred to in class. Exams will cover material presented in class as well as material covered only in the textbook and the additional assigned readings. Meeting with fellow students on a weekly basis to discuss and review course material is strongly encouraged!

A few requests: Please arrive on time for class and turn off all cell phones and beepers. I will generally need to set up computer equipment before class, so if you wish to speak with me, it is better to do so after class is over or during office hours. If you want to reach me outside of class, it is best to email me. I get a LOT of email, so make sure that you include “Psych 310” in the header of all emails to me so that I don’t miss your email. Although it may sometimes take me a few days to respond (especially if I am out of town) I do try to respond to all emails. Also, please remember that an email to any course instructor is a professional communication. I can respond much more completely to an email if I can understand it.

You will want to become well-acquainted with the WebCT site for this course. Selected lecture slides will be posted on this site. These slides are not meant to serve as a substitute for attending class and taking notes – if you miss class, you will probably miss some important information, case studies, and demos that facilitate your understanding of the course material. The slides are designed to save you time in class by providing images and diagrams that might be difficult to copy into your class notes. You can access many of the assigned articles from
links on the WebCT site. Study strategies, review questions and exam grades will also be posted on the site.

**Course requirements and grading**

There will be four mandatory in-class exams for this course; three during the semester, and one during finals week. The exams will consist of multiple-choice and/or fill-in-the-blank questions. Please bring a pencil and your ID to each exam. The final exam is not cumulative in the strict sense – although the course material tends to be cumulative in that mastering the material from the early part of the course (basic neuroanatomy and physiology) makes the remainder of the course easier.

Exams must be taken during regular class time (except for the final exam, which has a different scheduled time); dates are shown on the schedule below. Makeup exams will be given only in extreme circumstances and only when the student has contacted me prior to the scheduled time of the exam and received my approval. Failure to do so will result in a grade of zero on the missed exam. Makeup exams may differ in format from the regular exam.

Grades will be based on the four exams (100 points each). Each exam will be worth 25% of your final grade. Final grades will be based on the following scale:

- **A**: 91 – 100%
- **A-**: 90 – 90.99%
- **B+**: 89 – 89.99%
- **B**: 81 – 88.99%
- **B-**: 80 – 80.99%
- **C+**: 79 – 79.99%
- **C**: 71 – 78.99%
- **C-**: 70 – 70.99%
- **D+**: 69 – 69.99%
- **D**: 61 – 68.99%
- **D-**: 60 – 60.99%
- **F**: less than 60%

Grades are not negotiable. Use of the standard scale rather than a normal distribution (a “curve”) ensures fairness in grading without penalizing students who study in groups and help each other.

**Exam Dates:**

<table>
<thead>
<tr>
<th>Exam</th>
<th>Date</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>Sep 14</td>
</tr>
<tr>
<td>Exam 2</td>
<td>Oct 12</td>
</tr>
<tr>
<td>Exam 3</td>
<td>Nov 9</td>
</tr>
<tr>
<td>Exam 4</td>
<td>Finals week</td>
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**Disability Accommodations**

If you have a documented disability and anticipate needing accommodations in this course, please make arrangements to meet with me ASAP. Please request that a Disability Resources...
staff member send a Student Academic Accommodation Request (SAAR) form verifying your
disability and specifying the accommodations you will need. The Disability Resources office is
located in the Student Services Building, Room 1076. Their phone number is 515-294-7220,
TDD 515-294-6635.

**Attendance**

Attendance at every class is strongly encouraged, although I do not take attendance and you
are not expected to inform me when you miss class. Poor attendance will indirectly affect your
grade, because a lot of the material on the exams will be covered only in class. If you do miss
class, you should contact a fellow student to find out about any announcements and to obtain
lecture notes.

**Academic Dishonesty**

Procedures for dealing with academic dishonesty (cheating, plagiarism, etc.) will follow
university guidelines. See the ISU student handbook for details.

**Extra Credit**

About mid-semester, I will announce an optional extra credit assignment. The assignment
involves finding a news article related to class content and writing a summary and interpretation.
Details of the assignment will be given sometime between the second and third exams.

**Tentative Schedule of Topics and Readings**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
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| 8/24   | Introduction -- Chapter 1<br>
"Mustangs, monists, and meaning" *Scientific American*, Sep. 2004 |
| 8/26-8/31 | Anatomy of the Nervous System/Research Methods -- Chapter 4<br>
"The neurobiology of the self" *Scientific American*, Nov. 2005 |
| 9/2    | Nerve Cells & Nerve Impulses -- Chapter 2<br>
"White matter matters" *Scientific American*, Mar. 2008 |
| 9/7-9/9| Communication at Synapses/Neurotransmitters & Drugs -- Chapter 3<br>
"A molecule of motivation, dopamine excels at its task" *NY Times*, Oct. 2009 |
| 9/14   | EXAM 1                                                               |
| 9/16-9/21 | Brain Development, Recovery from Brain Damage -- Chapter 5<br>
"Sculpting the brain" *Scientific American*, Feb. 2009 |
| 9/23-9/28 | Vision -- Chapter 6<br>
"Anticipating the future to 'see' the present" *NY Times*, June 2008 |
# Tentative Schedule of Topics and Readings, Continued

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Readings/Articles</th>
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| 9/30       | Attention – Chapter 14 (pp. 428-433)     | "Stop paying attention: Zoning out is a crucial mental state"  
Discover Magazine, June 2009 |
| 10/5-10/7  | Touch & Pain – Chapter 7 (pp. 199-208)   | Phantom Limb Syndrome                                   |
|            |                                          | "Hearing colors, tasting shapes" Scientific American, May 2003 |
| 10/12      | EXAM 2                                   |                                                        |
| 10/14      | Movement – Chapter 8 (pp. 234-255)       | "The neuroscience of dance" Scientific American, July 2008 |
| 11/9       | EXAM 3                                   |                                                        |
| 11/18      | NO CLASS                                 |                                                        |
| 11/23-11/25| THANKSGIVING BREAK!!!                    |                                                        |
| 12/7-12/9  | Schizophrenia – Chapter 15 (pp. 449-460) | "Decoding Schizophrenia." Scientific American, Jan 2004 |
|            |                                          | Wrapup                                                  |
| Finals week| EXAM 4                                   |                                                        |