Psych 310 Brain & Behavior
Course Syllabus for Spring 2009

Instructor: Dr. Alison Morris
Office: Room 490, Science I
Phone: 294-7532
Email: almorris@iastate.edu
Course web page: WebCT

Office hours: Tuesday 1:10 p.m. – 2:30 p.m.
Wednesday 2:10 p.m. – 3:30 p.m.
Class meetings: T-TH 3:40-4:55 p.m.
Carver 0001

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

Required text: Kalat, James W. Biological Psychology, 9th 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 8th 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, language, and abnormal behavior.

Both behavior and the brain are complex topics, and there is a lot to learn in this course. Although there will be overlap between material discussed in lectures and the textbook, 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. You should read the relevant portions of the text ahead of time in order to better follow the presentations in class. Exams will cover material presented in class as well as material covered only in the textbook. If you want to do well in this class, you should attend all lectures and read all the assigned material in the textbook and in 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 – otherwise I might miss your email.

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 – if you miss class, you will probably miss some important information, case studies, and demos that help 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 write down in your class notes. You can access many of the assigned articles from links on the WebCT site. Study tips, 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 have a mixed format, with completion, multiple choice, and short essay 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 if you don’t master the material from the early part of the course (basic neuroanatomy and physiology) the remainder of the course will be more difficult.

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. Do not miss the exams! 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:

- Exam 1: Feb 5
- Exam 2: Mar 3
- Exam 3: Apr 2
- Exam 4: Finals week

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 an interpretation. Details of the assignment will be given sometime between the second and third exams.

Tentative Schedule of Topics

<table>
<thead>
<tr>
<th>DATES</th>
<th>READING</th>
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| 1/13   | Introduction  
Chapter 1  
"Mustangs, monists, and meaning." *Scientific American*, Sep. 2004  
| 1/15-1/20 | Anatomy of the Nervous System -- Chapter 4 (pp. 81-104) |
| 1/22   | Nerve Cells & Nerve Impulses – Chapter 2  
“Protein triggers nerve connections.” *Science News*, Nov. 29, 2003 |
| 1/27-2/3 | Communication at Synapses/Neurotransmitters -- Chapter 3  
Drugs -- Chapter 15 (pp. 452-455)  
| 2/5    | EXAM 1 |
| 2/10-2/12 | Brain Development, Recovery from Brain Damage -- Chapter 5 (pp. 121-139)  
“Study suggests new way to treat head trauma.” *Science News*, Apr. 10, 2004 |
| 2/17-2/19 | Vision – Chapter 6  
Attention – Chapter 14 (pp. 442-447) |
| 2/24-2/26 | Touch & Pain – Chapter 7 (pp. 206-213)  
Phantom Limb Syndrome |
| 3/3    | EXAM 2 |
| 3/5-3/10 | Movement – Chapter 8 (pp. 240-262) |
### Tentative Schedule of Topics, cont.

<table>
<thead>
<tr>
<th>DATES</th>
<th>READING</th>
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<tbody>
<tr>
<td>3/12</td>
<td>NO CLASS</td>
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<tr>
<td>3/17-3/19</td>
<td>SPRING BREAK!!</td>
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<tr>
<td>3/24-3/26</td>
<td>Wakefulness and Sleep – Chapter 9</td>
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<td>“Slumber may fortify memory, stir insight.” <em>Science News</em>, Jan. 24, 2004</td>
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<td>3/31</td>
<td>Reproductive Behavior – Chapter 11</td>
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<td>&quot;His brain, her brain.&quot; <em>Scientific American</em>, May, 2005</td>
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<tr>
<td>4/2</td>
<td>EXAM 3</td>
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<tr>
<td>4/7-4/9</td>
<td>Emotional Behaviors – Chapter 12</td>
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<td>“Brain receptor shapes voles’ family values” <em>Science News</em>, Jul. 4, 1992</td>
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<tr>
<td>4/14-4/16</td>
<td>The Biology of Learning and Memory – Chapter 13 (pp. 383-403)</td>
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<td>4/21-4/23</td>
<td>Lateralization &amp; Language -- Chapter 14 (pp. 414-441)</td>
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<td>4/28-4/30</td>
<td>Schizophrenia and Mood Disorders – Chapter 15 (pp. 459-480)</td>
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<td>&quot;Decoding Schizophrenia.&quot; <em>Scientific American</em>, Jan 2004</td>
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<tr>
<td>Finals week</td>
<td>EXAM 4</td>
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* *Science News* and *Scientific American* are scientific journals that often feature article summaries in the notes column.