

## Syllabus for PSYC 375 (001) – Fall 2006

**Course:** Brain and Behavior – Part 1 (Fall 2006)  
PYCH 375 – 001

**Time:** Tuesday/Thursday 10:30AM – 11:45AM

**Location:** Robinson Hall-B, Room 220

**Instructor:** Reshma Kumar

**Contact:** **Office #** - 703-993-4667. Please do not leave a message on this voicemail, as it is difficult to retrieve. Use this number to reach me **only** during my office hours.  
**Email** - [rkumar3@gmu.edu](mailto:rkumar3@gmu.edu). The best way to reach me is via email.

**Office hours:** Tuesday 12:00PM – 1:00PM, or by appointment DKH (office), Rm. 2062.

**Deadlines:** Last day to add - September 12th  
Last day to drop - September 29th

**Required Text:** Kalat J.W. (2007) Biological Psychology, 9<sup>th</sup> Edition, Wadsworth/Thomson Learning: Belmont, CA.

### Course objectives:

- Introduce the field of neuroscience, including basic neuroanatomy, neural and synaptic transmission and mechanisms underlying behavior.
- Develop a foundation for the understanding of the central nervous system.
- Promote awareness of how brain function relates to behavior.

### Assignments:

(1) There will be four exams. Each will include multiple choice, fill-in-the-blanks and/or short essay questions from lectures and the text. All exams carry equal weight and the three highest grades will be counted toward your final grade in the course i.e. you can drop one exam. **There will be no make-up exams.**

(2) Each student will select one of the topics covered in the course and write a 3-5 page (double-spaced, size-12 font) paper. I expect you to cite at least 3 sources in your reference section. I must approve your topic no later than **Nov. 2**. The final paper is due, **in class**, on the last day of classes (**Dec. 7**). Papers left in my mailbox will not be accepted unless prior permission has been obtained.

**Term Paper:**

- Use **PubMed** or **PsycINFO** to search for articles on your topic of interest.
- Pick articles from reputable, peer-reviewed journals. Some examples are: *Science*, *Nature*, *Neuron*, *Nature Neuroscience*, *Psychological Science*, *Trends in Cognitive Science*. Check with me if you are unsure.
- GMU has electronic copies of several journals so it should not be difficult to find copies of the articles.
- In the paper, be sure to include the following sections: (1) Introduction - a brief description of the topic you are addressing in the paper, (2) Goal of paper - what aspect of the topic you are interested in addressing, (3) Methods - how the topic is researched i.e. what techniques are used, (4) Results - what has research revealed, and (5) Conclusions - what is the take-home message. (6) References - cite your sources of information.
- Examples of topics: These are just suggestions. I encourage you to come up with your own topic.
  - o Heredity versus the environment – what contributes more to behavior?
  - o The ethics of using animals in research
  - o Evolution of smell
  - o The Terry Wallis mystery - brain plasticity
  - o Emerging techniques to view the brain in action – EEG and fMRI

**Grading:**

Exams	25% each (25 x 3 = 75%)
Term paper	20%
In-class participation	5%
Letter Grades	A+ (97-100%), A (93-96%), A- (90-92%), B+ (87-89%), B (83-86%), B- (80-82%), C+ (77-79%), C (73-76%), C- (70-72%), D (60-69%), F (0-59%)

**Technology:**

Lectures will be in PowerPoint format.

**Special needs:**

If you are a student with a disability and you need academic accommodations, please see me and contact the Disability Resource Center (DRC) at 703-993-2474. All academic accommodations must be arranged through that office.

**Honor code:**

Students are reminded of the University honor code and are expected to adhere to the principles thereof.

**Important Note:** You are responsible for all announcements and any syllabus modifications made in class each week whether you are present or not.

<b>Date</b>	<b>Chapter</b>	<b>Topic</b>
August 29 (Tue.)	-	<i>Introduction</i>
August 31	Ch. 1	<i>The major issues</i>
September 5 (Tue.)	Ch. 2	<i>Cells of the nervous system</i>
September 7	Ch. 2	<i>The nerve impulse</i>
September 12 (Tue.)	Ch. 3	<i>Synapse and neurotransmission</i>
September 14	Ch.3	<i>Drugs + Exam Review</i>
September 19 (Tue.)	<b>Exam 1</b>	
September 21	Ch. 4	<i>Structure of the Nervous System</i>
September 26 (Tue.)	Ch. 4	<i>Structure of the Nervous System (cont.)</i>
September 28	Ch. 4	<i>Cerebral Cortex</i>
October 3 (Tue.)	Ch. 4	<i>Cerebral Cortex (cont.)</i>
October 5	Ch. 4	<i>Research Methods</i>
October 10 (Tue.)	No class due to Columbus day	
October 12	Ch. 5	<i>Development of the brain</i>
October 17 (Tue.)	Ch. 5	<i>Plasticity after brain damage</i>
October 19	Ch. 5	<i>Plasticity after brain damage (cont.) + Exam Review</i>
October 24 (Tue.)	<b>Exam 2</b>	
October 26	Ch. 6	<i>Visual System</i>
October 31 (Tue.)	Ch. 6	<i>Visual perception</i>
November 2	Ch. 6	<i>Visual perception (cont.) + paper topics due</i>
November 7 (Tue.)	Ch. 6	<i>Development of vision</i>
November 9	Ch. 6	<i>Visual attention</i>
November 14 (Tue.)	Ch. 7	<i>Audition</i>
November 16	Ch. 7	<i>Audition (cont.)</i>
November 21 (Tue.)	Ch. 7	<i>Mechanical senses</i>
November 23	Thanksgiving	
November 28 (Tue.)	Ch. 7	<i>Mechanical senses (cont.)</i>
November 30	Ch. 7	<i>Chemical senses</i>
December 5 (Tue.)	Ch. 7	<i>Chemical senses (cont.) + Exam Review</i>
December 7 (last day – Thu.)	<b>Exam 3 + Term Paper due</b>	
December 14 (Thu.)	<b>Exam 4 - cumulative</b>	<b>10:30AM - 1:15PM</b>