

# DEPARTMENT OF PSYCHOLOGY Faculty of Arts

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Psychology 375 (L01) Brain and Behaviour

**Instructor:** Giuseppe Iaria **Lecture Location:** SA106

**Phone:** 403 220 8482 **Lecture Days/Time:** TR 11:00 – 12.15

Email: giaria@ucalgary.ca

Office: A218
Office Hours: Any time

## **Course Description and Goals**

The neural basis of learning, memory, language and thinking, as well as pathological, sexual, aggressive, and emotional behaviour that arises from neural and hormonal malfunctioning.

# **Prerequisites**

Psyc 205 – Principles of Psychology

## **Required Text**

An Introduction to Brain and Behavior (3rd Ed.), B. Kolb and I.Q. Whishaw (2011), Worth Publishers. The text is available at the University Bookstore.

Tutorials, quizzes, research exercises and essay questions are available at the companion website <a href="http://bcs.worthpublishers.com/kolbintro3e/">http://bcs.worthpublishers.com/kolbintro3e/</a>

#### **Evaluation**

There will be three multiple-choice exams. Test questions can be based on the lectures, the text, or both. The first two exams are not cumulative, whereas the final exam will include cumulative material covered throughout the course.

| Exam                 | % of Grade | Chapt | ters    | Date       |                  |          | Duration   |
|----------------------|------------|-------|---------|------------|------------------|----------|------------|
| First Exam           | 30         | 2-6   |         | Tuesday Fe | eb 14, 2012      |          | 50 minutes |
| Second Exam          | 30         | 8-11  |         | Tuesday M  | lar 20, 2012     |          | 50 minutes |
| Final Exam           | 40         | 12-15 | + other | To be Sche | eduled by the Ro | egistrar | 60 minutes |
| <b>Grading Scale</b> |            |       |         |            |                  |          |            |
| A+                   | 96-100%    | B+    | 80-84%  | C+         | 67-71%           | D+       | 54-58%     |
| Α                    | 90-95%     | В     | 76-79%  | С          | 63-66%           | D        | 50-53%     |
| A-                   | 85-89%     | B-    | 72-75%  | C-         | 59-62%           | F        | 0-49%      |

As stated in the University Calendar, it is at the instructor's discretion to round off either upward or downward to determine a final grade when the average of term work and final examinations is between two letter grades. To determine final letter grades, final percentage grades will be rounded up or down to the nearest whole percentage (e.g., 89.5% will be rounded up to 90% = A but 89.4% will be rounded down to 89% = A-).

#### **Lecture Schedule**

| Date     | Topic – Reading material will be provided in blackboard                          | Chapter   |  |  |  |
|----------|--|-----------|--|--|--|
| T Jan 10 | Introduction to the course. How the brain looks and how it works.                | 2         |  |  |  |
| R Jan 12 | The functions and structures of the nervous system.                              |           |  |  |  |
| T Jan 17 | The units of the nervous system: Neurons and Glia Cells.                         | 3         |  |  |  |
| R Jan 19 | How genes and cells affect behavior.   | 3         |  |  |  |
| F Jan 20 | Last day to drop a course with no W grade and tuition refund.                    |           |  |  |  |
| M Jan 23 | Last day for registration/change of registration.                                |           |  |  |  |
| T Jan 24 | The neuron electrical activity.  |           |  |  |  |
| R Jan 26 | How neurons integrate information.   |           |  |  |  |
| T Jan 31 | How neurons communicate and adapt.   |           |  |  |  |
| R Feb 2  | Neurotransmitters, synapses, learning and memory.                                |           |  |  |  |
| T Feb 7  | Measuring brain and behavior.  |           |  |  |  |
| R Feb 9  | Neuroimaging and other measurements of brain functions.                          |           |  |  |  |
| T Feb 14 | First Mid-Term Exam  | 2-6       |  |  |  |
| R Feb 16 | Guest lecture  | 8         |  |  |  |
| T Feb 21 | Reading days. No lecture.  |           |  |  |  |
| R Feb 23 | Reading days. No lecture.  |           |  |  |  |
| T Feb 28 | The visual system. What we see: Shapes and colors.                               | 9         |  |  |  |
| R Mar 1  | The visual cortex in action and the effects of injuries.                         | 9         |  |  |  |
| T Mar 6  | How we hear things: The auditory system.   | 10        |  |  |  |
| R Mar 8  | Language and music.  | 10        |  |  |  |
| T Mar 13 | How we move and control movements.   | 11        |  |  |  |
| R Mar 15 | The motor system and the somatosensory cortex                                    | 11        |  |  |  |
| T Mar 20 | Second Mid-Term Exam   | 8-11      |  |  |  |
| R Mar 22 | Causes of behaviour. The brain mechanisms of a motivated behaviour.              | 12        |  |  |  |
| T Mar 27 | Emotional, regulatory and nonregulatory behaviors.                               | 12        |  |  |  |
| R Mar 29 | Biological rhythms. Sleep stages and dreams.                                     | 13        |  |  |  |
| T Apr 3  | Guest lecture  | 13        |  |  |  |
| R Apr 5  | Explicit, implicit and emotional memory.   | 14        |  |  |  |
| T Apr 10 | Brain plasticity.  | 14        |  |  |  |
| R Apr 12 | Thinking, intelligence and consciousness.  | 15        |  |  |  |
|          | Lecture ends. Last day to participate in research and allocate research credits. |           |  |  |  |
| F Apr 13 | Last day to withdraw.  |           |  |  |  |
|          | FINAL EXAM   | 12-15     |  |  |  |
|          | (Scheduled by the Registrar)   | + others* |  |  |  |

<sup>\*</sup>questions randomly selected from chapters 2-6 and 8-11.

## **Reappraisal of Grades**

A student who feels that a piece of graded term work (e.g., term paper, essay, test) has been unfairly graded, may have the work re-graded as follows. The student shall discuss the work with the instructor within 15 days of being notified about the mark or of the item's return to the class. If not satisfied, the student shall immediately take the matter to the Head of the department offering the course, who will arrange for a reassessment of the work within the next 15 days. The reappraisal of term work may cause the grade to be raised, lowered, or to remain the same. If the student is not satisfied with the decision and wishes to appeal, the student shall address a letter of appeal to the Dean of the faculty offering the course within 15 days of the unfavourable decision. In the letter, the student must clearly and fully state the decision being appealed, the grounds for appeal, and the remedies being sought, along with any special circumstances that warrant an appeal of the reappraisal. The student should include as much written documentation as possible.

## **Plagiarism and Other Academic Misconduct**

Intellectual honesty is the cornerstone of the development and acquisition of knowledge and requires that the contribution of others be acknowledged. Consequently, plagiarism or cheating on any assignment is regarded as an extremely serious academic offense. Plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not. Students should examine sections of the University Calendar that present a Statement of Intellectual honesty and definitions and penalties associated with Plagiarism/Cheating/Other Academic Misconduct.

#### **Academic Accommodation**

It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 403-220-8237. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than 14 days after the start of this course.

#### Absence From A Test/Exam

Makeup tests/exams are NOT an option without an official University medical excuse (see the University Calendar). A completed Physician/Counselor Statement will be required to confirm absence from a test/exam for health reasons; the student will be required to pay any cost associated with this Statement. Students who miss a test/exam have 48 hours to contact the instructor and to schedule a makeup test/exam. Students who do not schedule a makeup test/exam with the instructor within this 48-hour period forfeit the right to a makeup test/exam. At the instructor's discretion, a makeup test/exam may differ significantly (in form and/or content) from a regularly scheduled test/exam. Except in extenuating circumstances (documented by an official University medical excuse), a makeup test/exam must be written within 2 weeks of the missed test/exam.

#### Freedom of Information and Protection of Privacy (FOIP) Act

The FOIP legislation disallows the practice of having student's retrieve tests and assignments from a public place. Therefore, tests and assignments may be returned to students during class/lab, or during office hours, or via the Department Office (Admin 275), or will be made available only for viewing during exam review sessions scheduled by the Department. Tests and assignments will be shredded after one year. Instructors should take care to not link students' names with their grades, UCIDs, or other FOIP-sensitive information.

## **Course Credits for Research Participation (Max 2% of final grade)**

Students in most psychology courses are eligible to participate in Departmentally approved research and earn credits toward their final grades. A maximum of two credits (2%) per course, including this course, may be applied to the student's final grade. Students earn 0.5% (0.5 credits) for each full 30 minutes of participation. The demand for timeslots may exceed the supply in a given term. Thus, students are not guaranteed that there will be enough studies

available to them to meet their credit requirements. Students should seek studies early in the term and should frequently check for open timeslots. Students can create an account and participate in Departmentally approved research studies at <a href="http://ucalgary.sona-systems.com">http://ucalgary.sona-systems.com</a>

The last day to participate in studies and to assign or reassign earned credits to courses is Apr 13<sup>th</sup>, 2012

# **Evacuation Assembly Point**

In case of an emergency evacuation during class, students must gather at the designated assembly point nearest to the classroom. The list of assembly points is found at <a href="http://www.ucalgary.ca/emergencyplan/assemblypoints">http://www.ucalgary.ca/emergencyplan/assemblypoints</a>

Please check this website and note the nearest assembly point for this course.

# **Student Organizations**

Psychology students may wish to join the Psychology Undergraduate Students' Association (PSYCHS).

They are located in Administration 170 and may be contacted at 403-220-5567.

Student Union VP Academic: Phone: 403-220-3911 <u>suvpaca@ucalgary.ca</u>

**Student Union Faculty Rep.:** Phone: 403-220-3913 socialscirep@su.ucalgary.ca

# Important Dates <a href="http://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html">http://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html</a>

The last day to drop this course with no "W" notation and still receive a tuition fee refund is January 20, 2012. Last day for registration/change of registration is January 23, 2012. The last day to withdraw from this course is Apr 13, 2012.