



**Department of Psychology**  
**Psychology 620.01 – Principles of Cognitive Neuroscience**  
**Fall 2010 – Course Outline**

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<b>Instructor:</b>	Dr. Giuseppe Iaria	<b>Lecture Location:</b>	TBA
<b>Phone:</b>	403 - 220 8482	<b>Lecture Days/Time:</b>	TBA/150 mins
<b>Email:</b>	<a href="mailto:garia@ucalgary.ca">garia@ucalgary.ca</a>		
<b>Office:</b>	A218		
<b>Office Hours:</b>	Any time		

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### **Course Description and Goals**

The course provides a detailed analysis of the principles of Cognitive Neuroscience, a fundamental knowledge to have for every graduate student interested in investigating the human behavior. Students will be introduced to basic concepts of cognitive neuroscience and the range of techniques used to investigate the neural mechanisms underlying core processes such as perception, attention, consciousness, etc. Class discussions and presentations of selective topics through scientific articles and book-chapters will be the core learning experience of this course. The final goal is for students to acquire knowledge about the research approach adopted in Cognitive Neuroscience.

### **Required Text**

There are no required textbooks for this course. Selected book-chapters and scientific articles will be provided by the instructor. However, students may consider purchasing the following optional textbook covering the basic principles of Cognitive Neuroscience (the book is available at the University Bookstore):

Gazzaniga, M.S., Ivry, R. B., Mangun, J.R. (2009). *Cognitive Neuroscience: The Biology of the Mind* (3<sup>rd</sup> Ed.). New York, NY: W. W. Norton & Company.

### **Evaluation**

Student evaluations will be based on class participation (10% of final grade), weekly short summary of selective material (20% of final grade), class presentations (30% of final grade), and one term paper on a topic selected by students and approved by the instructor. Missed or late assignments without proper documentation will receive 0%.

**A. Class Participation (10% of final grade).** Throughout the course, students are expected to contribute to the class discussion by asking thoughtful questions and commenting critically on the material presented.

**B. Weekly short summary (20% of final grade).** Twenty-four hours prior to each weekly class students are expected to submit via email ([garia@ucalgary.ca](mailto:garia@ucalgary.ca)) a brief summary of the material (scientific articles or selected manuscripts) that will be discussed/presented during the class on

the next day. The summary will be no longer than 500 words (about one single-spaced page, 12 pt Times font).

**C. Presentation (30% of final grade).** During the first week, students will be asked to select a date (and accordingly a topic according to the course schedule) for delivering their presentations. Students will present singly or in groups, once or multiple times, depending on class size, and assigned at random if the number of dates and topics chosen voluntarily do not cover the entire course schedule. The presentation should be in the format of PowerPoint slides and examine in detail the selective topic of the week through scientific articles or selected manuscripts (as indicated by the Instructor). The length of each presentation will be approximately 45 minutes, followed by a 15 minute class discussion. Students are encouraged to read additional research as needed and/or to prepare material (such as handouts or prepared questions) in order to engage the class and stimulate relevant discussion. Evaluation is based on creativity, clarity, accuracy and completeness of the presentation, as well as success in engaging colleagues' participation in class discussion.

**D. Term paper (40% of final grade).** Each student will write a term paper consisting of a research proposal. The paper can focus on any topic covered during the course. Students are required to formulate one or two experiments that would make an original contribution to the literature/topic that the paper focuses on. Term paper topics must be pre-approved by the instructor and papers (in Word format) may be submitted by email at any time during the course, but no later than December 10<sup>th</sup>, 2010.

The content of the paper must be organized into the following sub-headings: (1) Title, (2) Abstract (150 words maximum), (3) Topic/literature overview, (4) Proposal, (5) Methods, (6) Analyses, (7) Expected Results, (8) Implications and conclusions, (9) References (minimum 10). The body of the paper (excluding title page and reference list) must not exceed 10 pages (double-spaced, 12 pt Times font) and must be written in APA format. No figures or tables should be included in the paper. Evaluation is based on clarity, accuracy and completeness. Special consideration will be given to the originality of the proposal.

### Grading Scale

A+	96-100%	B+	80-84%	C+	67-71%	D+	54-58%
A	90-95%	B	76-79%	C	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-).

### Class Schedule (note that the day and time for each weekly class needs to be assigned)

Date	Topic/Activity/Readings/Due Date (revise and add columns & rows as necessary)
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<b>Week 1</b> (Sep 13 - 17)	A brief history of Cognitive Neuroscience. (Monday Sep 13 – Lecture begins)
<b>Week 2</b> (Sep 20 - 24)	Neuroanatomy and development. (Friday Sept 24 - Last day to drop a course with tuition refund)
<b>Week 3</b> (Sep 27 - Oct 01)	Methods of Cognitive Neuroscience. (Tuesday Sep 28 - Last day for registration/change of registration)
<b>Week 4</b> (Oct 04 - 08)	Sensation and Perception.
<b>Week 5</b> (Oct 11 - 15)	Object Recognition. Monday Oct 11 - Thanksgiving Day. No lecture. University closed.
<b>Week 6</b> (Oct 18 - 22)	Learning and Memory.
<b>Week 7</b> (Oct 25 - 29)	Language.
<b>Week 8</b> (Nov 01 - 05)	Hemispheric Specialization.
<b>Week 9</b> (Nov 08 - 12)	Attention and Consciousness. Thursday Nov 11 & Friday Nov 12 - Remembrance & Reading days. No lecture.
<b>Week 10</b> (Nov 15 - 19)	Cognitive Control.
<b>Week 11</b> (Nov 22 - 26)	Emotion.
<b>Week 12</b> (Nov 29 – Dec 03)	Social Cognition.
<b>Week 13</b> (Dec 06 – Dec 10)	Evolutionary Perspectives. Friday Dec 10 - Lecture ends. Last day to withdraw.

### 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.

### **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 <http://www.ucalgary.ca/emergencyplan/assemblypoints>  
Please check this website and note the nearest assembly point for this course.

### **Important Dates**

The last day to drop this course and **still receive a tuition fee refund** is **September 24<sup>th</sup>, 2010**. Last day for registration/change of registration is **September 28<sup>th</sup>, 2010**. The last day to withdraw from this course is **December 10<sup>th</sup>, 2010**.