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**Psychology 531**

**Nervous System Development**

<b>Instructor:</b>	Richard Dyck	<b>Lecture Location:</b>	A253
<b>Phone:</b>	403-220-4206	<b>Lecture Days/Time:</b>	T/R: 12:30PM-1:45PM
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<b>Office:</b>	A028		
<b>Office Hours:</b>	TBD		

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**Course Description and Goals**

The function of the human brain is mediated by billions of cells and trillions of connections. In order to understand human brain function we need to understand how these processes arise and the ways in which they change throughout a lifetime. The goal of this course is to provide a contemporary overview of CNS development from biological, behavioural and clinical perspectives.

**Prerequisites**

Psyc 205 – Principles of Psychology; Psyc 375 – Behavioural Neuroscience

**Required Text**

The required text for the course is: Sanes, D.H., Reh, T.A., and Harris, W.A. (2012) Development of the Nervous System, Academic Press. We will be covering a majority of the textbook. Additional reading materials may be drawn from a collection of sources, including classic journal articles in the field, more recent reports and review papers.

**Evaluation**

The final course grade will be based on:

- 1) Midterm examination: 35%
  - a. 75 minutes in class on Oct 25
  - b. Multiple choice, short answer and Long answer/essay questions
  - c. Examines information covered by Chapters 1-5, in lecture, and any additional readings
- 2) Final examination 2: 40%
  - a. 2 h – registrar scheduled
  - b. Multiple choice, short answer and Long answer/essay questions
  - c. Comprehensive examination. Greater emphasis (75%) on information covered in Chapters 6-10, in lecture, and any additional readings since the midterm examination.
- 3) Term Paper: 25%
  - a. On any topic dealing with normal or abnormal nervous system development.
  - b. Maximum of 20 double-spaced pages, not including references.

- c. 12 point Times font (about 15 characters/inch).
- d. The paper topic, in the form of an outline, must be approved by instructor no later than 4:00 pm November 8th.
  - i. **Reduction of final paper grade by 5% for each 24h interval that the paper outline is late.**
- e. Paper will be graded on two criteria: **presentation (25%)**, including grammar, organization, clarity of writing, and other skills pertaining to written English, and **content (75%)**, including the accuracy of information presented, etc.
- f. Paper to be handed in/emailed by 4:00pm December 9th, 2011.
  - i. **Reduction of one letter grade (eg. A- to B-) for each 24h interval that the paper is late.**

### 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.

In this course there will be no rounding up of final grades, especially in light of the opportunities students have to increase their final grade via research participation.

### Tentative Lecture Schedule

#### September

- 11 Introduction
- 13/18 Chapter 1 – Neural Induction
- 20/25 Chapter 2 – Polarity and Regionalization
- 27 Chapter 3 – Birth and Migration

#### October

- 2 Chapter 3
- 4/9 Chapter 4 – Determination and Differentiation
- 11 Chapter 5 – Axon Growth and Guidance
- 16/18 Society for Neuroscience meeting, no lectures
- 23 Chapter 5- Axon Growth and Guidance
- 25 Midterm examination (Chapters 1-5, lecture notes and readings)
- 30 Chapter 6 – Target Selection

#### November

- 1 Chapter 6– Target Selection
- 6/8 Chapter 7 – Survival and Growth
- 13 Reading Days, no lecture
- 15/22 Chapter 8-Synapse Formation and Function
- 27/29 Chapter 9 – Refinement of Synaptic Connections

#### December

- 4/6 Invited lectures

### **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 <http://ucalgary.sona-systems.com>. The last day to participate in studies and to assign or reassign earned credits to courses is **Dec 7, 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 <http://www.ucalgary.ca/emergencyplan/assemblypoints>  
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 [suvpaca@ucalgary.ca](mailto:suvpaca@ucalgary.ca)

**Student Union Faculty Rep.:** Phone: 403-220-3913 [socialscirep@su.ucalgary.ca](mailto:socialscirep@su.ucalgary.ca)

### **Important Dates**

The last day to drop this course with no "W" notation and **still receive a tuition fee refund** is **September 21, 2012**. Last day for registration/change of registration is **September 24, 2012**. The last day to withdraw from this course is **December 7, 2012**.