



Department of Psychology
Psychology 631.04 (L2) – Principles of Brain Development
Winter 2010 – Course Outline

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|----------------------|--|---------------------------|-----------------|
| Instructor: | Richard Dyck | Lecture Location: | A135 |
| Phone: | 220-4206 | Lecture Days/Time: | W 14:00 – 16:50 |
| Email: | rdyck@ucalgary.ca | | |
| Office: | Admin 028 | | |
| Office Hours: | By appointment | | |

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. The following topics will be covered:

Biology: Neural Development: Neuronal Birth and Migration, Differentiation, Axon Outgrowth and Guidance, Neuronal Survival, Refinement of Connections

Behaviour: Sensory, Motor and Cognitive Development; Genetic and Epigenetic Influences (Nature vs Nurture)

Developmental Disorders including, but not limited to: Autism, ADHD, Down's Syndrome, Dyslexia, Epilepsy, Fetal Alcohol Syndrome, Fragile X Syndrome, Parkinson's Disease, Retts Disorder, Schizophrenia, Spina bifida, William's Disorder

Required Text

The required text for the course is: Sanes, D.H., Reh, T.A., and Harris, W.A. (2006) Development of the Nervous System, 2nd edition, Academic Press. Other books, as well as original papers, will be made available from the instructor, as needed.

Evaluation

The final course grade will be based on: 1) The content and quality of oral presentations (60%), 2) Contribution to the discussion (10%; you are **expected** to ask many good questions of the presenters), and 3) Term Paper (30%; due at the end of term).

Everyone is expected to read every chapter/paper. Presenters should prepare a 50 minute Powerpoint talk that describes the assigned chapter/paper. Some comment on the background, techniques, significance, good points, failings, etc... are expected from the presenter AND from everyone else (after the presentation is completed).

Term Paper

Term papers are to be on a topic of interest to the student, within the limits of the course focus (nervous system development) and must be approved by the instructor. **The term paper is due by noon on April 16. It can be submitted via email or in the green box outside of A275.**

Note that it is the student's responsibility to ask the instructor for feedback during the course.

Grading Scale

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|----|---------|----|--------|----|--------|----|--------|
| 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% |

Lecture Schedule

| Date | Topic/Readings/Presentations |
|-------------|---------------------------------|
| January 6 | Introduction and Organizational |
| January 13 | Chapter 1, 2 |
| January 20 | Chapter 3, 4 |
| January 27 | Chapter 5, 6 |
| February 3 | Chapter 7, 8 |
| February 10 | Chapter 9 |
| February 17 | Reading Week |
| February 23 | Chapter 10 |
| March 3 | Selected Topics |
| March 10 | Selected Topics |
| March 17 | Selected Topics |
| March 24 | Selected Topics |
| March 31 | Selected Topics |
| April 7 | Selected Topics |

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 for registration/change of registration is **Jan 22nd, 2010**. The last day to withdraw from this course is **Apr 16th, 2010**.