

NEUR3211.
RESEARCH TOPICS IN NEUROSCIENCE
Year 2008

- Jul 31** **Pascal Carrive.** Introduction: Course outline
Ken Ashwell. Getting wired up: how neurons connect up, exuberant connections and pruning.
- Aug 7** **Paul Bertrand.** The enteric nervous system: Understanding the little brain in your gut.
- Aug 14** **Renee Morris.** Spinal cord injury and regeneration.
- Aug 21** **Gary Housley.** Development of the afferent and efferent innervation of the cochlea
- Aug 28** **Pascal Carrive.** Brain control of cardiovascular function. Homeostatic regulation and emotions.
- Sept 4** **George Paxinos.** The rhombomeric model of understanding brain organization and function.
- Sept 11** **Margaret Morris.** Hypothalamic control of appetite.
- Sept 18** **Caroline Rae.** Intrinsic brain activity. What is it and what can it tell us?
- Sept 25** **Peregrine Osborne.** Is drug addiction a chronic brain disease?
- Oct 2** Mid session break
- Oct 9** **Richard Vickery.** Cortical processing of visual information.
- Oct 16** **Eryn Werry.** New approaches to understanding neurodegenerative diseases – adult neural stem cells
- Oct 23** **Students poster presentations.** Students present their projects.

Course Coordinator:

A/Prof P. Carrive, Anat, SOMS Room M106, ext 52467

p.carrive@unsw.edu.au

Contributing Lecturers:

Dr. Ken Ashwell (KA) Anat, SOMS
Dr. Paul Bertrand, Phys & Pharm, SOMS
Prof. Gary Housley, Phys & Pharm, SOMS
Prof. Margaret Morris (MM), Phys & Pharm, SOMS
Dr. Renee Morris (RM) Anat, SOMS
Dr. Peregrine Osborne (PO) RNSH, Univ Sydney
Prof. George Paxinos (GP) POWMRI
Prof. Caroline Rae (VM), POWMRI
Dr. Richard Vickery (RV) Phys & Pharm, SOMS
Dr. Eryn Werry (CH) Anat, SOMS

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ANAT 3421. Research Topics in Neuroscience

Course outline, 2008

This course is taught in a seminar format with a single 3-hour session each Thursday afternoon (2-5 pm). All sessions will be held in room MG02 on the ground floor of the Wallace Wurth building. The session commences with a 1.5-2 hours lecture. This is followed by a coffee break. Students then present research papers they have chosen from a list given to them 2 weeks earlier. The papers are related to the topic of the session and will be assessed partly by the lecturer of the day, partly by the course coordinator. There will be approximately 3 presentations per sessions, and each student will make at least 2 presentations throughout the course.

The course is taught by researchers inside and outside the School who contribute their special expertise to the topics considered. We do not attempt to comprehensively cover all areas of neuroscience but rather to concentrate on areas of current research interest and expertise.

One aim of this course is to prepare students for a Honours in Neurosciences.

Course Co-ordinator: Dr Pascal Carrive, Room M106, Ext. 52467, p.carrive@unsw.edu.au

Assessment

A. Presentations during seminars.

30%

Each student will give 2-3 powerpoint presentations throughout the course, describing and discussing published studies. Each talk should last 10 mins, followed by 5 mins for questions. Students will be marked on the clarity of their presentation of the aims, methods results and conclusion of the paper, their understanding of the topic (as evidenced by their presentation and answers to questions), appropriate use of diagrams and illustrations, keeping to time, critical appraisal of the paper and its strengths and weaknesses, and ideas for further studies worth undertaking.

B. Scientific Essay

20%

Students can choose from a number of essay topics which will be circulated. Alternatively they can suggest a topic of their own interest, provided it is not something they have done for another subject and that someone can be found to mark it. The topic must be agreed with the course co-ordinator before they get underway. Essays should not be more than 3000 words in length and are due for week 10 on October 9, (There will be a penalty -1 mark per day- for entries after the deadline). Essays will be marked by the contributing lecturers (or other appropriate staff for own topic) and the course co-ordinator.

C. Creative or critical Essay

20%

Students will have to write an essay on a neuroscience related topic that will be decided by the course coordinator. Not more than 3000 words. The essay is due one week after the last session, on October 30 (same penalty as above).

D. Project

20%

The students will choose a research project from those offered by the lecturers of the course. They will spend a minimum of 10 hours in the chosen laboratory witnessing or participating in experiments. The projects will be presented as posters (done in powerpoint) in front of the class during week 12 on October 23. It is not important that the experiment

'works' but that the students understand the problem, the methods used, and that they discuss the study critically.

E. Participation in class

10%

Interaction is important in this course. Students are expected to attend all classes and interact with the lecturers. In addition, they are expected to ask questions to fellow students after their presentations. This will account for 10% of the total mark.