



FACULTY OF MEDICINE  
SCHOOL OF MEDICAL SCIENCES

NEUR3211

# RESEARCH TOPICS IN NEUROSCIENCES

SESSION 2, 2013

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## **Course staff**

- The coordinator of the course is Dr Pascal CARRIVE, Associate Professor in the Department of Anatomy, School of Medical Sciences. The lecturers involved in the course will vary each year. Their names and contact emails are shown in the Course schedule section.
- Contacts for Dr Carrive:
  - Office: Wallace-Wurth Building, room 328
  - Tel: 9385 2467
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## **Course details**

- Unit of Credits: 6
- Undergraduate course, Year 3, Session 2
- Prerequisite: ANAT3411 or equivalent (if coming from an other University)
- Venue: Lecture theatre LG03, Wallace Wurth Building

## **Course aims**

- Expose the students to a broad range of research topics in the neurosciences. These topics will be presented by UNSW neuroscientists actively involved in research.
- Prepare 3<sup>rd</sup> year students to a Honours in Neuroscience

## **Student learning outcomes**

- awareness of neuroscience research at UNSW
- broader knowledge in Neurosciences
- understanding of the scientific method
- ability to read and understand scientific literature in neurosciences
- ability to present orally research papers
- ability to write scientific essays
- experience in a research laboratory

## **The rationale behind the course approach to learning and teaching**

- Third year students should be mature enough to learn independently. The aim of this course is to expose them to a wide range of topics to expand their knowledge and raise their interests in neurosciences. The coordinator of the course will

provide regular feedback on their ability to think critically, present orally and write essays.

### Teaching strategies

- The course is taught in a seminar format with a single 3-hour session each Wednesday morning (10 am to 1 pm; WW LG03). 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 2-3 presentations per sessions, depending on the number of students in the course.
- The lecturers are researchers within the School and its affiliated centers. They will contribute with their special expertise to the topics proposed. 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.

### Assessment

The assessment is continuous throughout the semester and consists of 5 elements with different weights (see below). There is no final exam.

#### A. Presentations during sessions. 30%

Each student will give 2-3 powerpoint presentations throughout the course, describing and discussing published studies. Each talk should not exceed 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. Essays should not be more than 3000 words in length and are due on October 9 (week 10 of the course). There will be a penalty -1 mark per day- for entries after the deadline). Essays will be marked by the contributing lecturers 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 November 6 (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 the last session on October 30. 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.

## Academic honesty and plagiarism

Plagiarism is not acceptable and will be checked with Turnitin.

### What is Plagiarism?

Plagiarism is the presentation of the thoughts or work of another as one's own.\* Examples include:

- direct duplication of the thoughts or work of another, including by copying material, ideas or concepts from a book, article, report or other written document (whether published or unpublished), composition, artwork, design, drawing, circuitry, computer program or software, web site, Internet, other electronic resource, or another person's assignment without appropriate acknowledgement;
- paraphrasing another person's work with very minor changes keeping the meaning, form and/or progression of ideas of the original;
- piecing together sections of the work of others into a new whole;
- presenting an assessment item as independent work when it has been produced in whole or part in collusion with other people, for example, another student or a tutor; and
- claiming credit for a proportion a work contributed to a group assessment item that is greater than that actually contributed.†

For the purposes of this policy, submitting an assessment item that has already been submitted for academic credit elsewhere may be considered plagiarism.

Knowingly permitting your work to be copied by another student may also be considered to be plagiarism.

Note that an assessment item produced in oral, not written, form, or involving live presentation, may similarly contain plagiarised material.

The inclusion of the thoughts or work of another with attribution appropriate to the academic discipline does *not* amount to plagiarism.

The Learning Centre website is main repository for resources for staff and students on plagiarism and academic honesty. These resources can be located via:

[www.lc.unsw.edu.au/plagiarism](http://www.lc.unsw.edu.au/plagiarism)

The Learning Centre also provides substantial educational written materials, workshops, and tutorials to aid students, for example, in:

- correct referencing practices;
- paraphrasing, summarising, essay writing, and time management;
- appropriate use of, and attribution for, a range of materials including text, images, formulae and concepts.

Individual assistance is available on request from The Learning Centre.

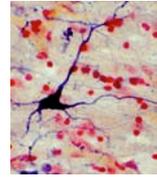
Students are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting, and the proper referencing of sources in preparing all assessment items.

\* Based on that proposed to the University of Newcastle by the St James Ethics Centre. Used with kind permission from the University of Newcastle

## Course schedule



**NEUR 3211.**  
**RESEARCH TOPICS IN NEUROSCIENCE**  
Wednesdays 10am-1 pm, in LG03.



- Aug 7* **Pascal Carrive.** Introduction: Course outline  
**Ken Ashwell.** Getting wired up: how neurons connect up, exuberant connections and pruning.
- Aug 14* **Matthias Klugmann.** Genes therapy to the central nervous system
- Aug 21* **Gary Housley.** Development of the afferent and efferent innervations of the cochlea.
- Aug 28* **Gila Moalem-Taylor.** Neuro-immune crosstalk in nervous system disorders and pathological pain.
- Sept 4* **Renee Morris.** Spinal cord injury and regeneration.
- Sept 11* **Thomas Fath.** Building complex neuronal networks – cell intrinsic mechanisms of neurite formation.
- Sept 18* **Pascal Carrive.** Brain control of cardiovascular function. Homeostatic regulation and emotions.
- Sept 25* **Tim Karl.** Schizophrenia and gene-environment interactions.
- Oct 2* Mid session break
- Oct 9* **Olivier Piguet.** Biological correlates of dementia syndromes.
- Oct 16* **Caroline Rae.** Imaging in Neurosciences.
- Oct 23* **Yue Huang.** Genetics of Parkinson's disease.
- Oct 30* **Students poster presentations.** Students present their projects.

Course Coordinator:

A/Prof P. Carrive, Anat, SOMS Room 328 WW3E, ext 52467 [p.carrive@unsw.edu.au](mailto:p.carrive@unsw.edu.au)

Contributing Lecturers:

Prof Ken Ashwell Anat, SOMS  
 A/Prof M. Klugmann Phys, SOMS  
 Prof Gary Housley, Phys, SOMS  
 Dr Gila Moalem-Taylor, Anat, SOMS  
 Dr Renee Morris, Anat, SOMS  
 Dr Thomas Fath, Anat, SOMS  
 Dr Tim Karl, NeurA  
 Prof Caroline Rae, NeurA  
 A/Prof Olivier Piguet, NeurA  
 Dr Yue Huang, NeurA

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**Resources for students**

- There is no specific textbook for this course. However, if students want to purchase a textbook, the recommended one is “Principles in Neural Sciences”, fourth Edition by E.R. Kandel, J.H. Schwartz and T.M. Jessell and published by McGraw-Hill
- The main resource is Medline accessible via the UNSW library website. See: [info.library.unsw.edu.au/web/services/services.html](http://info.library.unsw.edu.au/web/services/services.html)

**Course evaluation and development**

- A course evaluation form will be distributed on the last day of the course. Constructive feedback is important to fulfill the need and desire of the students and identify strength and pitfalls of the course.

**NEUR 3211. 2012  
 NEUROSCIENCE RESEARCH SEMINARS  
 EVALUATION**

1. I have enjoyed doing this course:  
 strongly agree      agree      undecided      disagree      strongly disagree
2. The 3 sessions I enjoyed most were: .....
3. Were the topics covered in the course broad enough? Were there areas that you would have liked covered?  
 .....
4. Do you feel that you have gain much knowledge in Neurosciences?  
 .....
5. Is the seminar format of the course appropriate for learning new material?  
 .....
6. Is continuous assessment better than a final exam?  
 .....
7. Did you find the research project useful or interesting? Did it give you an idea of what research might be like?  
 .....
8. Was there a good balance between the oral and written assessments?  
 .....
9. Did you read the papers before the session?    Yes;    No;    Only the abstract.  
 How much time did you spend reading the papers?.....
10. Has the course improved your oral presentation skills?  
 .....
11. Has the course improved your reading/writing skills?

.....  
13. What were the best aspects of the course (other than biscuits)  
.....  
.....

14. Will you do a Honours at UNSW next year? If yes, will it be in Neurosciences?  
.....

15. Any suggestions for improvement/changes:  
.....  
.....  
.....

**Other matters**

- Regular attendance, arriving on time at the beginning of the session and interaction are primordial. This will be taken into account in the Participation mark (element E in the Assessment)
- Students must be aware of and adhere to Occupational Health and Safety rules in the laboratories where they will conduct their Research Project.
- Equity and diversity: students who have a disability that requires some adjustment in their learning and teaching environment are encouraged to discuss their study needs with the course coordinator prior to, or at the commencement of the course.