



**UNSW**  
AUSTRALIA

Medical Sciences  
Medicine

# Research Topics in Neurosciences NEUR3211

Course Convenor: Dr Renée Morris  
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Course Outline  
Session 2, 2016

CRICOS Provider Code: 00098G

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Please read this outline in conjunction with the following pages on the [School of Medical Sciences website](#):

- [Advice for Students](#)
- [Learning Resources](#)

(or see "STUDENTS" tab at [medicalsciences.med.unsw.edu.au](http://medicalsciences.med.unsw.edu.au) )

## Course Convenor and Co-Convenor

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Course convenor: Dr Renée Morris.  
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Course co-convenor: A/Prof Pascal Carrive.  
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## Course Details

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- Units of Credit: 6
- Undergraduate course, Year 3, Session 2
- Prerequisite: ANAT3411 or NEUR 3121 or another equivalent (contact course coordinator)
- Time: Friday 10:00 am to 1:00 pm
- Venue: Pioneer Lecture Theatre, AGSM Building (G27 on Kensington Campus map)

## Course Aims

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The aim of NEUR3211 is to provide third year students a rewarding learning experience that will prepare them for their Neuroscience Honours year and beyond. Blended learning will be used throughout the course to provide the students with a unique opportunity:

- To foster their ability to learn independently
- To develop their critical thinking skills within the course and in real life situations
- To improve their oral and written communication skills
- To develop as reflective scholars
- To foster collegiality while working in a team
- To solve problems within the context of the course and beyond
- To gain awareness of ethics in neuroscience and beyond

## Resources for Students

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There is no textbook for this course.

## Learning Outcomes

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Upon completion of this course, the students will be able to:

- Demonstrate knowledge of the key concepts in neuroscience
- Critically evaluate research papers in neuroscience
- Actively participate in scientific discussion
- Demonstrate satisfactory oral and written communication skills
- Reflect on personal experience
- Work effectively in a team
- Use a scientific approach to tackle roadblocks in order to make advancement in a particular aspect of neuroscience

## Teaching Strategy

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- The course is delivered in a seminar format with a single 3-hour session each. The session commences with a 1.5-hour lecture delivered by experts in their respective field of research. These guest lecturers are researchers within the School and its affiliated centres who will contribute with their special expertise to the topics proposed. In these lectures, the students will gain knowledge regarding key concepts in neuroscience. There will be 3-5 polling questions embedded in the lectures to enhance students learning and participation.
- In the remaining half of the sessions, Students will individually present a research paper that they will have previously chosen from a number of papers selected by the guest lecturer of the session. Question time will follow each presentation. Each student presentation will be assessed by the lecturer of the day, the course coordinator and/or the course co-convenor and a subgroup of students. There will be approximately 2-4 presentations per session, depending on the number of students in the course. Participation during these sessions is essential.
- As a 'signature' component of the course, the students will spend a minimum of 10 hours in one of the host laboratories within SoMS and affiliated research centres. Although the students will not be allowed to be hands on during these laboratory sessions due to Health & Safety issues, they will familiarise themselves with how experiments related to the research theme(s) of the host laboratory are planned and conducted. It is likely that students will team up together for this component of the course. The outcome of these experiments will be presented by each group of students in the form of a poster summarising the rationale, methods, results, conclusion and significance of the experiments that they observed. Moreover, each student in the groups will individually write a short reflective report (no longer than 1,500 words) on their personal experience stemming from their lab visit.
- Students will write a 3000-word essay on a neuroscience-related topic selected by the course convenor.

## Assessment

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- Oral presentations 20%
- 3000-word essay 20%
- Poster 20%
- Reflective report 10%
- Final theory exam 20%
- Participation 10%

## Academic Honesty & Plagiarism

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The UNSW standards for academic honesty and plagiarism are defined in the website <https://student.unsw.edu.au/plagiarism>. Briefly, 'UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW staff and students have a responsibility to adhere to this principle of academic integrity. Plagiarism undermines academic integrity and is not tolerated at UNSW. *Plagiarism at UNSW is defined as using the words or ideas of others and passing them off as your own.*' Essays will be scrutinised for plagiarisms with Turnitin.

## Course Schedule

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|---------|---|
| 29 July | <b>Dr Renée Morris</b> and <b>A/Prof Pascal Carrive</b> .<br>Welcome  |
| 5 Aug   | <b>Dr Georg Von Jonquiere</b> .<br>Gene therapy for neurological disorders  |
| 12 Aug  | <b>Prof Caroline Rae</b> .<br>Imaging in Neuroscience.  |
| 19 Aug  | <b>Dr Thomas Fath</b> .<br>Building complex neuronal networks – cell intrinsic mechanisms of neurite formation.   |
| 26 Aug  | <b>A/Prof Pascal Carrive</b> .<br>Brain control of cardiovascular function – homeostatic regulation and emotions. |
| 2 Sept  | <b>Dr Gila Moalem-Taylor</b> .<br>Neuro-immune crosstalk in nervous system disorders and pathological pain        |
| 9 Sept  | <b>Dr Renée Morris</b> .<br>Spinal cord injury and regeneration: Can we go forward?                               |
| 16 Sept | <b>Dr Natasha Kumar</b> .<br>The molecular basis for pH sensing in the brain: focus on respiratory chemoreception |
| 23 Sept | TBA   |
| 30 Sept | <b>Mid-session break</b>  |
| 7 Oct   | <b>Week off</b>   |
| 14 Oct  | <b>Dr Kharen Doyle</b> .<br>Stem cell-based therapy for neurodegenerative disease.                                |
| 21 Oct  | <b>Dr Vibeke Catts</b> and <b>Prof Cyndi Shannon Weikert</b> . TBA.   |
| 28 Oct. | <b>Poster presentations</b>   |