



# PSYN855

## Neuroanatomy for Neuropsychologists

S1 Day 2018

*Department of Psychology*

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## General Information

Unit convenor and teaching staff

Course convenor and Lecturer

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Credit points

4

Prerequisites

Admission to MCLinNeuro

Corequisites

Co-badged status

Unit description

In this unit students explore the human brain, and examine the neuroanatomical and behavioural consequences of brain damage. The unit adopts the standard correlative neuroanatomy approach, discussing development of the nervous system and the anatomy of the mature nervous system (the brain stem and associated structures, diencephalon, and telencephalon; blood supply; white matter pathways; ventricles; and meninges).

## Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

## Learning Outcomes

On successful completion of this unit, you will be able to:

- describe the ways the nervous system is classified and know how this classification system came about
- be able to describe the meaning of key terms used in neuroanatomy and

neuropsychology

conceptualise the relationship between different components of the same system (e.g., the pyramidal and extra-pyramidal components of the motor system)

identify brain structures (including cortical and subcortical structures and blood vessels)

and explain what is known about their role in producing behaviour

explain the anatomical basis of the disorders commonly seen in clinical practice and uncommon disorders

understand the implications of brain damage for neuropsychological practice

present a critique of a published single case with acquired brain injury

describe the relationship between anatomical findings and pattern of behavioural

changes in a published single case study

## Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Critique recent case</u>	10%	No	various
<u>Case report</u>	35%	No	7 May
<u>Multiple choice test</u>	25%	No	9 April
<u>Exam</u>	30%	No	4 June

### Critique recent case

Due: **various**

Weighting: **10%**

As a group exercise (n= 4) students will present and critique a recently published single case. Each group will do this once. I've selected the single cases. An important goal is to discuss the cases in an interactive manner. I hope that with a little planning and advance preparation, the case presentations will be a stimulating and enjoyable experience for all. One group of students will present the case: background to the disorder, detail of the case including the CT or MRI scans, details of the tests conducted and what was found, what conclusions can be drawn like they were presenting at a case conference at a hospital. They will also critique the conclusions and comment of what additional data would clarify the conclusions. The remaining students (probably 3 groups of 4) will ask at least two questions.

On successful completion you will be able to:

- conceptualise the relationship between different components of the same system (e.g., the pyramidal and extra-pyramidal components of the motor system)

- identify brain structures (including cortical and subcortical structures and blood vessels) and explain what is known about their role in producing behaviour
- explain the anatomical basis of the disorders commonly seen in clinical practice and uncommon disorders
- understand the implications of brain damage for neuropsychological practice
- present a critique of a published single case with acquired brain injury
- describe the relationship between anatomical findings and pattern of behavioural changes in a published single case study

## Case report

Due: **7 May**

Weighting: **35%**

Make a power point presentation as if you were presenting this case (in a journal article supplied by Jo) to colleagues at a university seminar. In a maximum of ten slides (not including title slide, which must include your name and student number, and references) include

- a description of the case and context
- the research question: what link was the author trying to establish? include why this is an interesting question
- the neuroanatomical and test data
- information about the tests chosen, what they measure and their appropriateness
- what conclusion was drawn
- what additional data would strengthen or diminish the conclusion
- any criticisms. There is no need to include criticisms such as the need for more unspecified research or the problem of generalisability per se. Focus on the data collected and the conclusions. Submit via the Ilearn site by 5pm on the due date

On successful completion you will be able to:

- conceptualise the relationship between different components of the same system (e.g., the pyramidal and extra-pyramidal components of the motor system)
- identify brain structures (including cortical and subcortical structures and blood vessels) and explain what is known about their role in producing behaviour
- explain the anatomical basis of the disorders commonly seen in clinical practice and uncommon disorders
- understand the implications of brain damage for neuropsychological practice
- present a critique of a published single case with acquired brain injury

## Multiple choice test

Due: **9 April**

Weighting: **25%**

There will be a 40 item multiple choice test held on 10th April 2017. Questions will be drawn from the material presented in lectures.

On successful completion you will be able to:

- describe the ways the nervous system is classified and know how this classification system came about
- be able to describe the meaning of key terms used in neuroanatomy and neuropsychology
- conceptualise the relationship between different components of the same system (e.g., the pyramidal and extra-pyramidal components of the motor system)
- identify brain structures (including cortical and subcortical structures and blood vessels) and explain what is known about their role in producing behaviour
- explain the anatomical basis of the disorders commonly seen in clinical practice and uncommon disorders
- understand the implications of brain damage for neuropsychological practice
- present a critique of a published single case with acquired brain injury

## Exam

Due: **4 June**

Weighting: **30%**

In this exam you will be required to label photographs of brain structures and answer short answer questions. Questions will be drawn from the material presented in the practical sessions and the lectures.

On successful completion you will be able to:

- describe the ways the nervous system is classified and know how this classification system came about
- be able to describe the meaning of key terms used in neuroanatomy and neuropsychology
- conceptualise the relationship between different components of the same system (e.g., the pyramidal and extra-pyramidal components of the motor system)
- identify brain structures (including cortical and subcortical structures and blood vessels) and explain what is known about their role in producing behaviour

- explain the anatomical basis of the disorders commonly seen in clinical practice and uncommon disorders
- understand the implications of brain damage for neuropsychological practice
- present a critique of a published single case with acquired brain injury

## Delivery and Resources

### Classes

Lectures will be held on 26 Feb, 5 March, 12 March, 19 March, 26 March and 2 April.

Case presentations will be held during class (except for the first lecture)

### Lab/Prac Classes

There are three "prac" sessions to be held on May 14th, 21st, and 28th in the Australian School of Advanced Medicine (ASAM) from 2-4pm. The neuropathologist teaching the classes is Dr Michael Rodriguez. He will expect you to ask and answer questions.

The lab is a secure area. To allow us to enter as a group please meet at 1:55 pm at the latest at the ASAM entrance [building F10A, opposite the Macquarie University hospital, the building has a large red awning].

Please download the worksheets. It will be helpful to bring something like a clipboard as there are no desks. There are lockers for personal possessions as they cannot be taken into the lab area.

Bring a lab coat if you have one. Disposable gowns and gloves will be provided.

Please wear fully enclosed shoes which cover the dorsal part of the foot (no ballet flats, flip-flops/thongs) and tie long hair back. No photographs or other recording devices are allowed. Follow the instructions of ASAM staff if you are directed in matters of lab safety, protocol or other matters.

No eating or drinking (including chewing gum) is permitted in the lab.

**Respect for the dead is expected at all times.**

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)

- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

Undergraduate students seeking more policy resources can visit the [Student Policy Gateway](https://students.mq.edu.au/support/study/student-policy-gateway) (<https://students.mq.edu.au/support/study/student-policy-gateway>). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central](http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>).

## Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/study/getting-started/student-conduct>

## Results

Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit [ask.mq.edu.au](http://ask.mq.edu.au).

## Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

## Learning Skills

Learning Skills ([mq.edu.au/learningskills](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

## Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

## Student Enquiries

For all student enquiries, visit Student Connect at [ask.mq.edu.au](http://ask.mq.edu.au)

## IT Help

For help with University computer systems and technology, visit [http://www.mq.edu.au/about\\_us/offices\\_and\\_units/information\\_technology/help/](http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/).

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

## Graduate Capabilities

### PG - Capable of Professional and Personal Judgment and Initiative

Our postgraduates will demonstrate a high standard of discernment and common sense in their professional and personal judgment. They will have the ability to make informed choices and decisions that reflect both the nature of their professional work and their personal perspectives.

This graduate capability is supported by:

#### Learning outcomes

- present a critique of a published single case with acquired brain injury
- describe the relationship between anatomical findings and pattern of behavioural changes in a published single case study

#### Assessment tasks

- Critique recent case
- Case report

### PG - Discipline Knowledge and Skills

Our postgraduates will be able to demonstrate a significantly enhanced depth and breadth of knowledge, scholarly understanding, and specific subject content knowledge in their chosen fields.

This graduate capability is supported by:

#### Learning outcomes

- describe the ways the nervous system is classified and know how this classification system came about
- be able to describe the meaning of key terms used in neuroanatomy and neuropsychology
- conceptualise the relationship between different components of the same system (e.g.,



- the pyramidal and extra-pyramidal components of the motor system)
- identify brain structures (including cortical and subcortical structures and blood vessels) and explain what is known about their role in producing behaviour
- explain the anatomical basis of the disorders commonly seen in clinical practice and uncommon disorders
- understand the implications of brain damage for neuropsychological practice
- present a critique of a published single case with acquired brain injury
- describe the relationship between anatomical findings and pattern of behavioural changes in a published single case study

## **Assessment tasks**

- Critique recent case
- Case report
- Multiple choice test
- Exam

## **PG - Critical, Analytical and Integrative Thinking**

Our postgraduates will be capable of utilising and reflecting on prior knowledge and experience, of applying higher level critical thinking skills, and of integrating and synthesising learning and knowledge from a range of sources and environments. A characteristic of this form of thinking is the generation of new, professionally oriented knowledge through personal or group-based critique of practice and theory.

This graduate capability is supported by:

## **Learning outcomes**

- describe the ways the nervous system is classified and know how this classification system came about
- be able to describe the meaning of key terms used in neuroanatomy and neuropsychology
- conceptualise the relationship between different components of the same system (e.g., the pyramidal and extra-pyramidal components of the motor system)
- identify brain structures (including cortical and subcortical structures and blood vessels) and explain what is known about their role in producing behaviour
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- understand the implications of brain damage for neuropsychological practice
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changes in a published single case study

## Assessment tasks

- Critique recent case
- Case report
- Multiple choice test
- Exam

## PG - Research and Problem Solving Capability

Our postgraduates will be capable of systematic enquiry; able to use research skills to create new knowledge that can be applied to real world issues, or contribute to a field of study or practice to enhance society. They will be capable of creative questioning, problem finding and problem solving.

This graduate capability is supported by:

## Learning outcomes

- conceptualise the relationship between different components of the same system (e.g., the pyramidal and extra-pyramidal components of the motor system)
- identify brain structures (including cortical and subcortical structures and blood vessels) and explain what is known about their role in producing behaviour
- explain the anatomical basis of the disorders commonly seen in clinical practice and uncommon disorders
- understand the implications of brain damage for neuropsychological practice
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- describe the relationship between anatomical findings and pattern of behavioural changes in a published single case study

## Assessment tasks

- Critique recent case
- Case report
- Multiple choice test
- Exam

## PG - Effective Communication

Our postgraduates will be able to communicate effectively and convey their views to different social, cultural, and professional audiences. They will be able to use a variety of technologically supported media to communicate with empathy using a range of written, spoken or visual formats.

This graduate capability is supported by:

## Learning outcomes

- describe the ways the nervous system is classified and know how this classification system came about
- be able to describe the meaning of key terms used in neuroanatomy and neuropsychology
- identify brain structures (including cortical and subcortical structures and blood vessels) and explain what is known about their role in producing behaviour
- present a critique of a published single case with acquired brain injury
- describe the relationship between anatomical findings and pattern of behavioural changes in a published single case study

## Assessment tasks

- Critique recent case
- Case report
- Exam

## PG - Engaged and Responsible, Active and Ethical Citizens

Our postgraduates will be ethically aware and capable of confident transformative action in relation to their professional responsibilities and the wider community. They will have a sense of connectedness with others and country and have a sense of mutual obligation. They will be able to appreciate the impact of their professional roles for social justice and inclusion related to national and global issues

This graduate capability is supported by:

## Learning outcomes

- present a critique of a published single case with acquired brain injury
- describe the relationship between anatomical findings and pattern of behavioural changes in a published single case study

## Assessment tasks

- Critique recent case
- Case report