



SPH 825

Neuroanatomy and Physiology for Speech Pathologists

S1 Day 2016

Dept of Linguistics

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General Information

Unit convenor and teaching staff

Claire Layfield

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Elisabeth Harrison

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Credit points

4

Prerequisites

Admission to MSpchLngPath

Corequisites

Co-badged status

Unit description

This unit provides an understanding of human neuroanatomy and physiology with an emphasis on the systems that mediate swallowing, speech, and language. The unit begins with an exploration of the brain, discussing the development of the central and peripheral nervous systems, the neuroanatomy of the mature system, and the behavioural manifestations of brain damage. The structure and functions of the human body are also studied in order to enhance speech pathology students' understanding of normal and abnormal/disordered functioning of the human body.

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:

- Have a comprehensive understanding of neuroanatomy relevant for the clinicians and researchers in speech and language pathology. This involves an understanding of normal and abnormal brain anatomy, methods of assessing brain injury, common and uncommon manifestations of acquired brain injury with particular emphasis on those seen in clients using speech pathology services.
- Understand the anatomy and physiology of the three systems which support speech

production: the respiratory, phonatory and articulatory/resonance systems.

- Be able to describe the aetiologies of disorders of articulation and swallowing.
- Understand the scientist-practitioner model. You will see how research informs clinical practice.
- Develop competence in critical thinking, written and oral communication, and information literacy.

Assessment Tasks

Name	Weighting	Due
<u>Assignment 1</u>	15%	Week 6
<u>Anatomy Quizzes</u>	15%	Week 7, 8, 9
<u>Presentation</u>	20%	Week 12
<u>Exam</u>	50%	Exam period

Assignment 1

Due: **Week 6**

Weighting: **15%**

Using published research develop a 15 slide powerpoint presentation as if you were presenting it to colleagues at a university seminar.

On successful completion you will be able to:

- • Have a comprehensive understanding of neuroanatomy relevant for the clinicians and researchers in speech and language pathology. This involves an understanding of normal and abnormal brain anatomy, methods of assessing brain injury, common and uncommon manifestations of acquired brain injury with particular emphasis on those seen in clients using speech pathology services.
- • Be able to describe the aetiologies of disorders of articulation and swallowing.
- • Understand the scientist-practitioner model. You will see how research informs clinical practice.
- • Develop competence in critical thinking, written and oral communication, and information literacy.

Anatomy Quizzes

Due: **Week 7, 8, 9**

Weighting: **15%**

A total of three anatomy quizzes will be administered in the anatomy laboratory sessions in Weeks 7, 8 and 9 (i.e., one quiz for each week). The quizzes will be administered at the end of each anatomy laboratory session and will take approximately 5 minutes to complete.

On successful completion you will be able to:

- • Have a comprehensive understanding of neuroanatomy relevant for the clinicians and researchers in speech and language pathology. This involves an understanding of normal and abnormal brain anatomy, methods of assessing brain injury, common and uncommon manifestations of acquired brain injury with particular emphasis on those seen in clients using speech pathology services.
- • Understand the anatomy and physiology of the three systems which support speech production: the respiratory, phonatory and articulatory/resonance systems.

Presentation

Due: **Week 12**

Weighting: **20%**

In small groups (3-4), students will complete a 10min case presentation outlining to the class and be prepared to answer questions following the presentation.

On successful completion you will be able to:

- • Have a comprehensive understanding of neuroanatomy relevant for the clinicians and researchers in speech and language pathology. This involves an understanding of normal and abnormal brain anatomy, methods of assessing brain injury, common and uncommon manifestations of acquired brain injury with particular emphasis on those seen in clients using speech pathology services.
- • Be able to describe the aetiologies of disorders of articulation and swallowing.
- • Understand the scientist-practitioner model. You will see how research informs clinical practice.
- • Develop competence in critical thinking, written and oral communication, and information literacy.

Exam

Due: **Exam period**

Weighting: **50%**

The final examination will cover development of the nervous system, the anatomy of the mature nervous system, the behavioural consequences of brain damage, and the anatomy, physiology and pathology of the respiratory, phonatory and articulatory / resonance systems. It will comprise short answer questions focusing on integrating knowledge of neuroanatomy and physiology to

disorders commonly seen in clients using speech pathology services, clinical reasoning and problem-solving.

On successful completion you will be able to:

- • Have a comprehensive understanding of neuroanatomy relevant for the clinicians and researchers in speech and language pathology. This involves an understanding of normal and abnormal brain anatomy, methods of assessing brain injury, common and uncommon manifestations of acquired brain injury with particular emphasis on those seen in clients using speech pathology services.
- • Understand the anatomy and physiology of the three systems which support speech production: the respiratory, phonatory and articulatory/resonance systems.
- • Be able to describe the aetiologies of disorders of articulation and swallowing.
- • Understand the scientist-practitioner model. You will see how research informs clinical practice.
- • Develop competence in critical thinking, written and oral communication, and information literacy.

Delivery and Resources

Students are expected to attend 3hr classes which will comprise some lecture time and participate in in-class learning activities, including small group work, discussions and debates. Students will also attend x3 anatomy laboratory sessions.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](#). Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy http://mq.edu.au/policy/docs/academic_honesty/policy.html

New Assessment Policy in effect from Session 2 2016 http://mq.edu.au/policy/docs/assessment/policy_2016.html. For more information visit http://students.mq.edu.au/events/2016/07/19/new_assessment_policy_in_place_from_session_2/

Assessment Policy prior to Session 2 2016 <http://mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy prior to Session 2 2016 <http://mq.edu.au/policy/docs/grading/policy.html>

Grade Appeal Policy <http://mq.edu.au/policy/docs/gradeappeal/policy.html>

Complaint Management Procedure for Students and Members of the Public http://www.mq.edu.au/policy/docs/complaint_management/procedure.html

Disruption to Studies Policy http://www.mq.edu.au/policy/docs/disruption_studies/policy.html *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of 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/support/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.

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) 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

IT Help

For help with University computer systems and technology, visit 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

- Have a comprehensive understanding of neuroanatomy relevant for the clinicians and researchers in speech and language pathology. This involves an understanding of normal and abnormal brain anatomy, methods of assessing brain injury, common and uncommon manifestations of acquired brain injury with particular emphasis on those seen in clients using speech pathology services.
- Understand the anatomy and physiology of the three systems which support speech production: the respiratory, phonatory and articulatory/resonance systems.
- Be able to describe the aetiologies of disorders of articulation and swallowing.
- Understand the scientist-practitioner model. You will see how research informs clinical practice.
- Develop competence in critical thinking, written and oral communication, and information literacy.

Assessment tasks

- Assignment 1
- Presentation
- Exam

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

- Have a comprehensive understanding of neuroanatomy relevant for the clinicians and researchers in speech and language pathology. This involves an understanding of normal and abnormal brain anatomy, methods of assessing brain injury, common and

uncommon manifestations of acquired brain injury with particular emphasis on those seen in clients using speech pathology services.

- • Understand the anatomy and physiology of the three systems which support speech production: the respiratory, phonatory and articulatory/resonance systems.
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Assessment tasks

- Assignment 1
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- 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

- • Have a comprehensive understanding of neuroanatomy relevant for the clinicians and researchers in speech and language pathology. This involves an understanding of normal and abnormal brain anatomy, methods of assessing brain injury, common and uncommon manifestations of acquired brain injury with particular emphasis on those seen in clients using speech pathology services.
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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

- • Have a comprehensive understanding of neuroanatomy relevant for the clinicians and researchers in speech and language pathology. This involves an understanding of normal and abnormal brain anatomy, methods of assessing brain injury, common and uncommon manifestations of acquired brain injury with particular emphasis on those seen in clients using speech pathology services.
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- • Develop competence in critical thinking, written and oral communication, and information literacy.

Assessment tasks

- Assignment 1
- Presentation
- 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

- • Have a comprehensive understanding of neuroanatomy relevant for the clinicians and researchers in speech and language pathology. This involves an understanding of normal and abnormal brain anatomy, methods of assessing brain injury, common and uncommon manifestations of acquired brain injury with particular emphasis on those seen in clients using speech pathology services.
- • Understand the scientist-practitioner model. You will see how research informs clinical practice.
- • Develop competence in critical thinking, written and oral communication, and information literacy.

Assessment tasks

- Assignment 1
- Presentation
- 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

- • Have a comprehensive understanding of neuroanatomy relevant for the clinicians and researchers in speech and language pathology. This involves an understanding of normal and abnormal brain anatomy, methods of assessing brain injury, common and uncommon manifestations of acquired brain injury with particular emphasis on those seen in clients using speech pathology services.
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