

# REHA 2016 HEARING, SPEECH AND SWALLOWING SCIENCE

**Credit Points** 10

**Legacy Code** 301381

**Coordinator** Manisha Dayal ([https://directory.westernsydney.edu.au/search/name/Manisha Dayal/](https://directory.westernsydney.edu.au/search/name/Manisha%20Dayal/))

**Description** Speech Pathologists require a sound knowledge of the relevant structures and functions of the central and peripheral nervous system to be able to understand hearing, language and swallowing processes, and how disease or dysfunction affects them. This unit covers the anatomical and vascular structures of the head and neck, their development and functions, medical imaging and neural plasticity. Topics include the somatosensory systems, motor systems, and the role of the brainstem, cranial nerves, and executive systems in controlling hearing, speech, language and swallowing processes. Common congenital, degenerative and acquired neurological disorders are described. This unit will develop knowledge relevant to other units related to speech pathology.

**School** Science

**Discipline** Speech Pathology

**Student Contribution Band** HECS Band 2 10cp

Check your HECS Band contribution amount via the Fees ([https://www.westernsydney.edu.au/currentstudents/current\\_students/fees/](https://www.westernsydney.edu.au/currentstudents/current_students/fees/)) page.

**Level** Undergraduate Level 2 subject

**Pre-requisite(s)** NATS 1009

**Co-requisite(s)** NATS 1010

**Incompatible Subjects** NATS 3006 Anatomy of the Head Neck  
NATS 3037 Neuroanatomy

**Restrictions** Students must be enrolled in 4763 Bachelor of Speech Pathology or 4764 Bachelor of Speech Pathology (Honours).

**Assumed Knowledge**

Basic knowledge of anatomical and physiological concepts as introduced in relevant first year anatomy & physiology subjects.

## Learning Outcomes

On successful completion of this subject, students should be able to:

1. Identify and apply anatomical terminology when describing the anatomy and neuroanatomy of the head and neck regions.
2. Describe the blood supply to the head, neck and CNS regions.
3. Describe and explain the functional anatomy of the musculoskeletal elements of the skull; face; cervical and thoracic regions of the vertebral column; ear; nasal cavity; oral cavity; pharynx and larynx.
4. Review the normal structures and functions of the nervous system and relate them to medical imaging, development and developmental processes.
5. Describe and explain the normal functional roles of the brainstem, cranial nerves, and executive systems in controlling speech, hearing, language and swallowing processes, and how these

change in congenital, degenerative or acquired neurological conditions.

6. Create, deliver, and peer evaluate oral presentations based on case scenarios

## Subject Content

1. Functional gross anatomy of the head, neck and skull using cadaveric specimens and models with special emphasis on the ear, face, oral cavity, larynx, pharynx, and respiratory system
2. Embryological development of head, neck, brain and brainstem regions
3. Functional neuroanatomy of the brain, brainstem, cranial nerves, their spatial relationships with emphasis on regions associated with hearing, speech production and swallowing using cadaveric specimens, models, diagrams/images
4. Introduction to medical imaging techniques e.g. CT & MRI
5. Common congenital, degenerative and/or acquired neurological disorders that result in associated disorders of hearing, speech, and/or swallowing

## Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Item	Length	Percent	Threshold	Individual/ Group Task
Case studies	20 minutes	10	N	Group
Case study report	3 x 350 words	20	N	Individual
Intra-session test 1	45 mins	18	N	Individual
Intra-session test 2	30 mins	12	N	Individual
Final Exam	2 hours	40	N	Individual

Prescribed Texts

- Seikel, J.A., Drumright, D.G., & King, D.W. (2016). Anatomy and Physiology for Speech Language and Hearing (5th Ed.). US: Cengage Learning.

Teaching Periods

## Spring Campbelltown Day

**Subject Contact** Manisha Dayal ([https://directory.westernsydney.edu.au/search/name/Manisha Dayal/](https://directory.westernsydney.edu.au/search/name/Manisha%20Dayal/))

View timetable ([https://classregistration.westernsydney.edu.au/even/timetable/?subject\\_code=REHA2016\\_22-SPR\\_CA\\_D#subjects](https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=REHA2016_22-SPR_CA_D#subjects))