



# CAUD8106

## Advanced Ear and Hearing Assessments

Session 2, In person-scheduled-weekday, North Ryde 2024

*Department of Linguistics*

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#### Disclaimer

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## General Information

Unit convenor and teaching staff

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Credit points

10

Prerequisites

Admission to MCLinAudiology and CAUD8101 and CAUD8102 and CAUD8103

Corequisites

Co-badged status

### Unit description

Audiological clinical service delivery implies being able to assess hearing levels across the life span and in linguistically diverse populations where behavioural assessments are not sufficient. An understanding of objective techniques such as Otoacoustic Emissions, Auditory Brainstem Responses and Auditory Steady State Responses and their application will be developed in this unit. These assessments are often used in difficult-to-test populations that include infants, as well as populations that are unable to behaviourally respond. This unit also includes an examination of vestibular assessments and the related auditory physiology. The unit aims to define the various objective techniques; equip you to analyse, evaluate and integrate the results of the objective techniques with a view to plan rehabilitation and referral.

## 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:

**ULO1:** Explain auditory and vestibular physiology (peripheral to brainstem) to their related disorders, and pathophysiology, and apply their knowledge to design appropriate test battery (Capability 1 Scientist & Scholar)

**ULO2:** Perform and appropriately modify objective audiological test battery, as part of boarder assessment used in complex and non-complex cases, for site-of-lesion assessments (Capability 2 Practitioner)

**ULO3:** Integrate and interpret findings from audiological objective assessments, including vestibular assessments, and present to your client the diagnoses with appropriate referral pathway, using culturally- and age-appropriate language (Capability 2 Practitioner)

**ULO4:** Critically evaluate current scientific literature to inform the selection and use of relevant objective audiological assessment techniques including vestibular assessments in various audiological clinical settings at a local or global level (Capability 3 Citizen)

## General Assessment Information

Grade descriptors and other information concerning grading are contained in the [Macquarie University Assessment Policy](#).

All final grades are determined by a grading committee, in accordance with the Macquarie University Assessment Policy, and are not the sole responsibility of the Unit Convenor.

Students will be awarded a final grade and a mark which must correspond to the grade

descriptors specified in the [Assessment Procedure](#) (clause 128).

To pass this unit, you must demonstrate sufficient evidence of achievement of the learning outcomes, meet any ungraded requirements, and achieve a final mark of 50 or better.

Further details for each assessment task will be available on iLearn.

### Late Submissions

Unless a Special Consideration request has been submitted and approved, a 5% penalty (OF THE TOTAL POSSIBLE MARK) will be applied each day a written assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. Submission time for all written assessments is set at 11.55pm. A 1-hour grace period is provided to students who experience a technical concern.

For example:

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Number of days (hours) late	Total Possible Marks	Deduction	Raw mark	Final mark
1 day (1-24 hours)	100	5	75	70
2 days (24-48 hours)	100	10	75	65
3 days (48-72 hours)	100	15	75	60
7 days (144-168 hours)	100	35	75	40
>7 days (>168 hours)	100	-	75	0

Late submission of time sensitive tasks, such as timetabled tests/exams, scheduled performance assessments/presentations, scheduled practical assessments/labs, will be addressed by the unit convenor in a Special consideration application.

### Special Consideration

If you are unable to complete an assessment task on or by the specified date due circumstances that are unexpected, unavoidable, significantly disruptive and beyond your control, you may apply for special consideration in accordance with the [special consideration policy](#). Applications for special consideration must be supported by appropriate evidence and submitted via ask.mq.edu.au.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Exam</a>	40%	No	During exam period

Name	Weighting	Hurdle	Due
<u>Mastery Register</u>	10%	Yes	2024-11-04
<u>Pre/Post class consolidation quizzes</u>	15%	No	2024-08-17
<u>Case Study</u>	35%	No	2024-09-07

## Exam

Assessment Type <sup>1</sup>: Examination

Indicative Time on Task <sup>2</sup>: 30 hours

Due: **During exam period**

Weighting: **40%**

You will complete an exam consisting of both theoretical and case study based questions.

On successful completion you will be able to:

- Explain auditory and vestibular physiology (peripheral to brainstem) to their related disorders, and pathophysiology, and apply their knowledge to design appropriate test battery (Capability 1 Scientist & Scholar)
- Perform and appropriately modify objective audiological test battery, as part of boarder assessment used in complex and non-complex cases, for site-of-lesion assessments (Capability 2 Practitioner)
- Integrate and interpret findings from audiological objective assessments, including vestibular assessments, and present to your client the diagnoses with appropriate referral pathway, using culturally- and age-appropriate language (Capability 2 Practitioner)
- Critically evaluate current scientific literature to inform the selection and use of relevant objective audiological assessment techniques including vestibular assessments in various audiological clinical settings at a local or global level (Capability 3 Citizen)

## Mastery Register

Assessment Type <sup>1</sup>: Clinical performance evaluation

Indicative Time on Task <sup>2</sup>: 9 hours

Due: **2024-11-04**

Weighting: **10%**

**This is a hurdle assessment task (see assessment policy for more information on hurdle assessment tasks)**

Participation will be marked based on your completion of non-graded tasks related to the practica and online tasks on iLearn.

On successful completion you will be able to:

- Perform and appropriately modify objective audiological test battery, as part of boarder assessment used in complex and non-complex cases, for site-of-lesion assessments (Capability 2 Practitioner)
- Integrate and interpret findings from audiological objective assessments, including vestibular assessments, and present to your client the diagnoses with appropriate referral pathway, using culturally- and age-appropriate language (Capability 2 Practitioner)

## Pre/Post class consolidation quizzes

Assessment Type <sup>1</sup>: Quiz/Test

Indicative Time on Task <sup>2</sup>: 10 hours

Due: **2024-08-17**

Weighting: **15%**

You will complete a series of pre and post class quizzes that will prepare you for the upcoming consolidation classes, as well as close the feedback loop on what you learned in class and practical sessions.

On successful completion you will be able to:

- Explain auditory and vestibular physiology (peripheral to brainstem) to their related disorders, and pathophysiology, and apply their knowledge to design appropriate test battery (Capability 1 Scientist & Scholar)
- Integrate and interpret findings from audiological objective assessments, including vestibular assessments, and present to your client the diagnoses with appropriate referral pathway, using culturally- and age-appropriate language (Capability 2 Practitioner)

## Case Study

Assessment Type <sup>1</sup>: Case study/analysis

Indicative Time on Task <sup>2</sup>: 25 hours

Due: **2024-09-07**

Weighting: **35%**

You will be presented with various clinical cases. You will be asked to integrate the results and provide audiological diagnosis.

On successful completion you will be able to:

- Explain auditory and vestibular physiology (peripheral to brainstem) to their related disorders, and pathophysiology, and apply their knowledge to design appropriate test battery (Capability 1 Scientist & Scholar)
- Perform and appropriately modify objective audiological test battery, as part of boarder assessment used in complex and non-complex cases, for site-of-lesion assessments (Capability 2 Practitioner)
- Critically evaluate current scientific literature to inform the selection and use of relevant objective audiological assessment techniques including vestibular assessments in various audiological clinical settings at a local or global level (Capability 3 Citizen)

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<sup>1</sup> If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the [Writing Centre](#) for academic skills support.

<sup>2</sup> Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

## Delivery and Resources

This is a quasi-blended unit with in-person lectures, consolidations, practicals, and in-class workshops alongside pre-recorded online content. It is expected that students will complete the pre-recorded content in preparation for upcoming consolidation classes. Students will be informed of content release and expected tasks to complete before attending the consolidation class.

### Recommended Readings

These are provided on the iLearn site and include publications that align with the learning material. These are recommended to deepen your understanding of course content.

### Technology Used

Active participation in the learning activities throughout the unit may require students to have

access to a tablet, laptop or similar device. Students who do not own their own laptop computer may borrow one from the university library.

## Unit Schedule

Week	Date	Section	In-person Lectures - Wednesdays 9 AM-12 Noon	In-person (optional) tutorials
1	24 Jul	Basics	<b>Signals &amp; Systems</b> Introduction, signals and systems, signal generation and visualization using Matlab (workshop)	4-5 PM
2	31 Jul		<b>Neurophysiology of Auditory Responses</b> Auditory neurophysiology, biophysics of acoustic, receptor, and neural response generation and their recording requisites, OAE and ABR data visualization and analysis in Matlab (workshop)	5-5:30 PM
4	7 Aug	Auditory Evoked Responses	<b>Inner Ear Responses</b> Otoacoustic Emissions, Cochlear Microphonics, Compound Action Potentials, Summating Potentials	4-5 PM
5	14 Aug		<b>Auditory Brainstem Responses</b>	4-5 PM
6	21 Aug		<b>Cortical Auditory Evoked Potentials</b> Middle and late latency potentials, P300, Mismatch Negativity, and magnetoencephalography	4-5 PM
7	28 Aug	Vestibular Assessments	<b>Vestibular Assessments</b> Vestibular anatomy and physiology, Videonystagmography, Vestibular Evoked Myogenic Potentials, Video Head Impulse Testing and an introduction to vestibular disorders.	4-5 PM
8	4 Sep	Responses in the Frequency Domain	<b>Auditory Steady-State Responses</b>	4-5 PM
	5 Sep – 29 Oct	No 8106 Classes		
9	30 Oct		Revision	4-5 PM
	4-18 Nov	Exam weeks		

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au). 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](#)
- [Assessment Procedure](#)
- [Complaints Resolution Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#)

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

To find other policies relating to Teaching and Learning, visit [Policy Central](https://policies.mq.edu.au) (<https://policies.mq.edu.au>) and use the [search tool](#).

## Student Code of Conduct

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

## Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) 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 [connect.mq.edu.au](https://connect.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## Academic Integrity

At Macquarie, we believe [academic integrity](#) – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free [online writing and maths support](#), [academic skills development](#) and [wellbeing consultations](#).

## Student Support

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

## The Writing Centre

[The Writing Centre](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Workshops](#)
- [Chat with a WriteWISE peer writing leader](#)

- [Access StudyWISE](#)
- [Upload an assignment to Studiosity](#)
- [Complete the Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

## Student Services and Support

Macquarie University offers a range of [Student Support Services](#) including:

- [IT Support](#)
- [Accessibility and disability support](#) with study
- Mental health [support](#)
- [Safety support](#) to respond to bullying, harassment, sexual harassment and sexual assault
- [Social support including information about finances, tenancy and legal issues](#)
- [Student Advocacy](#) provides independent advice on MQ policies, procedures, and processes

## Student Enquiries

Got a question? Ask us via the [Service Connect Portal](#), or contact [Service Connect](#).

## 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.

## Inclusion and Diversity

Social inclusion at Macquarie University is about giving everyone who has the potential to benefit from higher education the opportunity to study at university, participate in campus life and flourish in their chosen field. The University has made significant moves to promote an equitable, diverse and exciting campus community for the benefit of staff and students. It is your responsibility to contribute towards the development of an inclusive culture and practice in the areas of learning and teaching, research, and service orientation and delivery. As a member of the Macquarie University community, you must not discriminate against or harass others based on their sex, gender, race, marital status, carers' responsibilities, disability, sexual orientation, age, political conviction or religious belief. All staff and students are expected to display

appropriate behaviour that is conducive to a healthy learning environment for everyone.

## Professionalism

In the Faculty of Medicine, Health and Human Sciences, professionalism is a key capability embedded in all our courses.

As part of developing professionalism, students are expected to attend all small group interactive sessions including clinical, practical, laboratory, work-integrated learning (e.g., PACE placements), and team-based learning activities. Some learning activities are recorded (e.g., face-to-face lectures), however, you are encouraged to avoid relying upon such material as they do not recreate the whole learning experience and technical issues can and do occur. As an adult learner, we respect your decision to choose how you engage with your learning, but we would remind you that the learning opportunities we create for you have been done so to enable your success and that by not engaging you may impact your ability to successfully complete this unit. We equally expect that you show respect for the academic staff who have worked hard to develop meaningful activities and prioritise your learning by communicating with them in advance if you are unable to attend a small group interactive session.

Another dimension of professionalism is having respect for your peers. It is the right of every student to learn in an environment that is free of disruption and distraction. Please arrive to all learning activities on time, and if you are unavoidably detained, please join activity as quietly as possible to minimise disruption. Phones and other electronic devices that produce noise and other distractions must be turned off prior to entering class. Where your own device (e.g., laptop) is being used for class-related activities, you are asked to close down all other applications to avoid distraction to you and others. Please treat your fellow students with the utmost respect. If you are uncomfortable participating in any specific activity, please let the relevant academic know.

## Changes since First Published

Date	Description
23/07/2024	New staff added to the unit.

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Unit information based on version 2024.02 of the [Handbook](#)