SPHL3308

Speech Production

Session 1, In person-scheduled-weekday, North Ryde 2025

Department of Linguistics

Contents

General Information

Unit convenor and teaching staff
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Credit points
10

Prerequisites
50cp at 2000 level or above including SPHL2216 or SPHL299 or SPH399

Corequisites

Co-badged status

Unit description

Speech is one of the most complex, yet most natural human behaviours, involving fine coordination of rapidly moving articulators. In this unit, we explore the mechanisms used by speakers of all languages to produce different consonants, vowels, syllables, and larger phonological structures, in infinitely expressive ways. We examine the anatomy and physiology of respiration, phonation, and articulation; the neuroanatomy and neurophysiology of speech and language; development and evolution of speech; and methods used for studying speech production. Practical exercises include analysis of speech gestures in articulographic data.

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: Demonstrate understanding of respiratory anatomy and physiology, and its use in speech

ULO2: Demonstrate advanced knowledge of laryngeal anatomy and phonatory physiology

ULO3: Identify the various structures associated with articulatory anatomy and physiology and demonstrate an understanding of how these are employed in speech production

ULO4: Demonstrate an understanding of neuroanatomy and neurophysiology of speech and language

ULO5: Analyse and report on speech data collected via speech physiology instrumentation to engage with theoretical issues in phonetics

ULO6: Describe important aspects of evolution, development and aging in relation to speech production

ULO7: Engage in a research rich environment

General Assessment Information

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:

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.

Assessment Tasks

Name	Weighting	Hurdle	Due
Speech Data Analysis Portfolio	45%	No	Weeks 2, 4, 8, 11
Articulographic Analysis	25%	No	Week 7

Name	Weighting	Hurdle	Due
Final Exam	30%	No	Exam Period

Speech Data Analysis Portfolio

Assessment Type [1]: Portfolio
Indicative Time on Task [2]: 31.5 hours
Due: **Weeks 2, 4, 8, 11**
Weighting: **45%**

The Speech Data Analysis Portfolio consists of a collection of evidence demonstrating student performance on a set of tasks that require an understanding of speech physiology and key methods used to study speech production. Students will apply this knowledge in the analyses of real speech data to demonstrate insights into the phonetic properties of speech.

On successful completion you will be able to:
- Demonstrate understanding of respiratory anatomy and physiology, and its use in speech
- Demonstrate advanced knowledge of laryngeal anatomy and phonatory physiology
- Identify the various structures associated with articulatory anatomy and physiology and demonstrate an understanding of how these are employed in speech production
- Analyse and report on speech data collected via speech physiology instrumentation to engage with theoretical issues in phonetics
- Engage in a research rich environment

Articulographic Analysis

Assessment Type [1]: Report
Indicative Time on Task [2]: 30 hours
Due: **Week 7**
Weighting: **25%**

The speech gestures underlying consonants and vowels will be identified and analyzed in an utterance of real speech. Data from a speech production database will be analyzed using tools for articulographic analysis. Understanding of speech gestures, coarticulatory processes, and the relationship between articulation and the acoustic speech signal will be demonstrated in a research report describing the findings of the analysis.

On successful completion you will be able to:
- Identify the various structures associated with articulatory anatomy and physiology and demonstrate an understanding of how these are employed in speech production
- Analyse and report on speech data collected via speech physiology instrumentation to engage with theoretical issues in phonetics
- Engage in a research rich environment

Final Exam

Assessment Type [1]: Examination
Indicative Time on Task [2]: 1.5 hours
Due: **Exam Period**
Weighting: **30%**

Knowledge and understanding of the topics covered in the unit will be assessed in a written examination requiring extended responses to a range of questions and problems.

On successful completion you will be able to:
- Demonstrate understanding of respiratory anatomy and physiology, and its use in speech
- Demonstrate advanced knowledge of laryngeal anatomy and phonatory physiology
- Identify the various structures associated with articulatory anatomy and physiology and demonstrate an understanding of how these are employed in speech production
- Demonstrate an understanding of neuroanatomy and neurophysiology of speech and language
- Analyse and report on speech data collected via speech physiology instrumentation to engage with theoretical issues in phonetics
- Describe important aspects of evolution, development and aging in relation to speech production

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[1] 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.

[2] 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 unit is designed to foster a detailed understanding of the mechanisms of speech production, including speech anatomy and speech physiology, and the methods used to study speech production processes. The unit provides students with essential theoretical and practical skills that are fundamental to understanding speech and hearing, and which underpin clinic careers in these fields.

Topics include: respiratory physiology and anatomy; laryngeal anatomy; phonation; articulatory anatomy and physiology; articulatory investigative techniques; neuroanatomy and neurophysiology; and developmental aspects of speech production.

You will engage in a range of online and face-to-face learning activities, including readings, lectures, multimedia materials, problem sets, workshops, seminars, and assessment tasks. In workshops and assessment tasks, you will analyze speech data to consolidate your understanding of breathing, phonation, articulation, and the ways that these mechanisms combine to produce different types of speech. Seminars will be held each week after students have engaged with all learning materials and attended workshops, to support your learning and allow you to test your understanding progressively throughout the semester. Preparation for and attendance at all classes is expected.

Unit Schedule

Details of all topics, readings, class schedules, and assessment tasks are provided on iLearn, and updated each week. It is your responsibility to consult iLearn regularly and make sure you are prepared for each class by familiarizing yourself with all learning resources and requirements.

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (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). 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) 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 or if you are a Global MBA student contact 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/

Academic Success

Academic Success 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/.

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.

Unit information based on version 2025.03 of the Handbook