

Program of Medical Audiology Sciences¹

This program is run in coordination with the Department of Otolaryngology Head and Neck Surgery at the Faculty of Medicine. The mission of the Medical Audiology Sciences (MAS) Program is to prepare students for a successful career in audiology by providing them with a foundation in liberal arts education, coupled with a high-quality clinical education that is underpinned by the fundamental sciences of audiology and a rigorous scientific approach. The academic program is designed to produce skilled clinicians who follow professional standards and ethical principles while serving individuals with hearing or balance disorders in Lebanon and the region. Through various professional and community service activities, the program strives to build in its students the importance of continuing education, developing leadership skills, as well as advocating and supporting the needs of all persons with hearing and vestibular disorders. The mission of the program is consistent with the mission of the institution in that it stresses the importance of providing academic excellence in teaching and research, inspiring students to become leaders in their professional field, as well as helping students develop a lifelong sense of learning and civic responsibility.

To graduate, all students must obtain a minimum grade of C+ in each of ORLG 220, 230, 240 and 250 and a cumulative GPA of 2.3 in the major field of study.

Course Description

MAUD 200 Overview of Audiology and Clinical Practice 1.0; 1 cr.
 This course is designed to acquaint the student with the profession of audiology and requirements for clinical practice. Students will complete 25 clinical observation hours.
First term.

MAUD 201 Anatomy and Physiology of the Auditory – Vestibular System 3.0; 3 cr.
 An in-depth coverage of anatomy and physiology of the auditory and vestibular systems. *First term. Prerequisite: PHYL 246 or BIOL 202.*

MAUD 202 Basic Audiological Procedures 2.2; 3 cr.
 A detailed consideration of the rationale, development, and psychoacoustic theory behind pure tone audiometry, speech audiometry, and clinical masking. Acoustic immittance will also be covered. Students will learn to perform and interpret basic audiological procedures and master clinical masking through hands-on training and software-based activities. *First term. Pre- or corequisite: MAUD 200 or consent of instructor.*

MAUD 203 Pediatric Audiology 3.0; 3 cr.
 This course surveys methods and procedures used in the evaluation and management of auditory function in neonates, infants, and young children. It includes identification and intervention procedures. There will be a review of special populations of children with hearing loss. Development of early hearing loss detection and intervention programs will be discussed. *First term. Pre- or corequisite: MAUD 201.*

¹) The program is frozen for this year.

MAUD 204 Acoustics, Psychoacoustics, and Instrumentation 2.2; 3 cr.

This course covers the fundamentals of sound, psychophysical measurement procedures, psychological acoustics, audiometric standards and electro-acoustic calibration of basic audiological equipment. Laboratory exercises are provided to illustrate course content. *First term.*

MAUD 205 Amplification I 2.2; 3cr.

This course covers the background and development of the design of hearing aids, ear mold acoustics, electroacoustic characteristics, performance standards and measurement techniques. *Second term. Prerequisite: MAUD 204.*

MAUD 206 Amplification II 2.2; 3 cr.

This course covers advanced procedures for selection and fitting of digital and programmable hearing aids. Students will learn subjective quality measurement, current and emerging prescriptive and fitting verification methods, and advanced hearing aid features. Auditory, visual, and vibrotactile receptive communication technologies will be covered, with an emphasis on needs assessment, selection, evaluation, and the verification process. Principles and procedures for implantable hearing devices from pre-candidacy evaluations through postoperative therapies will be discussed. *First term. Prerequisite: MAUD 205.*

MAUD 207 Auditory Evoked Potentials 3.0; 3 cr.

This course will cover basic concepts in electrophysiological recordings (e.g., electrode types/uses, far and near field recordings, volume conduction, dipole sources). Recording of both near- and far-field electrical responses will be studied. Recording techniques and test interpretation of common clinical evoked potentials will be covered, including electrocochleography (ECoChG), auditory brainstem response (ABR), and auditory steady-state response (ASSR). *Second term. Prerequisites: MAUD 201 and MAUD 202.*

MAUD 208 Practicum Project 0 cr.
Offered as MAUD 208A: Practicum Project I 1.4; 3 cr.
and MAUD 208B: Practicum Project II

This course aims to introduce students to research in the field of Audiology by engaging them in a Capstone project. Projects may take several forms including development of surveys, evidence-based research, business plans, critical literature reviews with applications to clinical problems solving, development of clinical protocols, or participation in on-going research projects in the department. Students will be required to write a scholarly report summarizing the project. *Second term. Prerequisite: ORLG 230.*

MAUD 209 Vestibular-Balance Assessment and Management 3.0; 3 cr.

The goal of the course is to provide students with a concise overview of the theory behind vestibular and balance testing and practical ways to assess and manage patients who have vestibular/balance problems. *First term. Prerequisites: MAUD 201 and ORLG 230.*

MAUD 210 Aural Rehabilitation and Counseling 3.0; 3 cr.

Overview of approaches to audiologic management of adults and children with hearing difficulties. Topics include in-depth interview techniques, self-assessment instruments, auditory training, speech reading, interdisciplinary teaming, communication repair strategies, technology, adjustment to amplification, and management of auditory processing disorders. Operation and troubleshooting techniques for amplification systems commonly used in a classroom will be discussed (e.g., hearing aids, FM systems, assistive listening devices, vibrotactile devices, and cochlear implants). The

course will also include psychoeducational/psychosocial and counseling strategies for patients and family management. *First term. Prerequisite: ORLG 230.*

MAUD 211 Medical Audiology 2.2; 3 cr.

An introduction to the major pathologies of the peripheral and auditory and vestibular systems. The course will include dysfunction arising from genetic factors, disease, and trauma, with an emphasis applied to presenting signs/symptoms, interpretation of laboratory / imaging results, and medical / surgical interventions. *Second term. Prerequisite: ORLG 240.*

MAUD 212 Special Topics 1.0; 1 cr.

This course is designed to address traditional or emerging topics in the field of audiology. The course will explore, in depth, a comparatively narrow subject which may be topical or of special interest to undergraduate students in Medical Audiology Sciences program. *Annually.*

MAUD 213 Environmental Audiology 3.0; 3 cr.

This course covers the effects of noise on health and society, hearing conservation programs, and noise measurement. Industrial, school, military, and social settings will be addressed. *Annually.*

ORLG 220 Screening Procedures Laboratory 1.9; 3 cr.

Beginning level audiologic practicum. Students will complete 90+ hours of clinical training under direct supervision. Clinical activities will include case history intake, biological calibration of equipment, otoscopic examinations, hearing screenings (pure tone, AABR, OAE), basic immittance testing. A weekly class meeting is held to discuss clinical cases and develop student report-writing skills. Infection control will also be discussed. *First term. Pre- or corequisites: MAUD 200 and MAUD 202.*

ORLG 230 Basic Clinical Procedures Laboratory 1.15; 5 cr.

150+ hours of clinically-supervised direct patient care. Students will be expected to perform and interpret basic behavioral and electrophysiological tests. A weekly class meeting is held to discuss clinical decision making and report writing. Management of unique populations will be covered (tinnitus, hyperacusis, malingering, ototoxicity). *Second term. Prerequisite: ORLG 220; co-requisite: MAUD 207.*

ORLG 240 Advanced Clinical Procedures Laboratory 1.15; 5 cr.

150+ hours of clinically-supervised direct patient care. Continued development of audiological assessment and intervention techniques for children and adults. Clinicians will be expected to administer and interpret balance/vestibular tests and electrophysiological tests, conduct electroacoustic assessment of hearing aids, make hearing aid adjustments based on probe-microphone and behavioral test results, and assist with the cochlear implant program. *under direct supervision. A weekly class meeting is held to discuss clinical decision making and report writing. First term. Prerequisite: ORLG 230, co-requisite MAUD 206 and 209.*

ORLG 250 Comprehensive Practice Laboratory 1.15; 5 cr.

150+ hours of clinically-supervised direct patient care. Clinicians will practice all aspects of audiological care, with greater independence. A weekly class meeting is held to discuss professional issues in audiology, including private practice management, coding and reimbursement, marketing and sales, malpractice, credentialing, and ethics and clinical integrity in the practice of the profession of audiology. *Second term. Prerequisite: ORLG 240.*