Audiology Course Descriptions

9501 Audiology Practicum I

First-year students will practice and improve their basic clinical assessment skills during this in-house placement. The goals of this in-house placement in HA Leeper Speech and Hearing Clinic placement are for Year 1 students to develop their basic audiological assessment skills and counselling abilities and to reinforce theory-to-practice drawing from concepts covered in concurrent and prerequisite course work.

9502 Audiology Practicum II

First-year students will be placed at clinical practicum sites within Canada. The placement is the first-year students' first experience with a full-time audiological placement. The placement will last approximately 8 weeks and include 30-40 hours of practicum per week. The external placement is intensive and allows the first-year student the opportunity to fine-tune their assessment skills or develop and improve their skills in other aspects of audiology. The nature and extent of professional skill development will depend on the clinical assessment and treatment philosophy of the practicum site.

9503 Audiology Practicum III

Second-year students will be supervised by clinical faculty members in the HA Leeper Speech and Hearing clinic. Second-year students will be exposed to a wider variety of appointments across the age span, including, but not limited to: IHP assessments/fittings/follow-ups, CAP assessments, amplification assessments/fittings/follow-ups, FM assessments/fittings/follow-ups, tinnitus assessments, and pediatric (non-IHP) assessments. This placement will provide second-year students the opportunity to broaden their clinical experience and expertise.

9504 Audiology Practicum IV

Second-year students are required to participate in course requirements including clinical placement activities at HA Leeper Speech and Hearing Clinic and may also be placed in off-campus clinic sites. Students will attend teaching clinics related to advanced practices (e.g., virtual care and vestibular intervention). Clinical competency development will be achieved through simulation and patient-facing in-person or virtual activities. Students will be provided a variety of learning opportunities such as auditory processing assessments, aural (re)habilitation, amplification assessments/fittings/follow-ups and repairs, assistive technologies, tinnitus assessments, vestibular assessments, hearing loss prevention programs, and pediatric assessments. Improvement in technique and continued growth in clinical skills and knowledge will be expected; second-year students should be working more independently and functioning in a more autonomous capacity with minimal supervision.

9505 Audiology Practicum V

Second-year students will be placed at clinical practicum sites within Canada. The external placement is the second-year students' second experience with a full-time audiological placement. The placement will last approximately 8-12 weeks and include 30-40 hours of practicum per week. The final external placement is intensive and allows the second-year student the opportunity to fine-tune their assessment skills, and achieve competence for entry to clinical practice.

9510 Principles of Clinical Audiometry

Focus Area: Clinical-Professional

This course will focus on the principles of pediatric and adult audiometric assessment and interpretation of the test results, with an emphasis on detection of hearing loss and determining the site of lesion (differential diagnosis).

9511 Applications in Audiometry

Focus Area: Clinical-Professional

This course will cover clinical audiological procedures and interpretation used in the assessment of hearing impairment across the lifespan, and promotes the transition from theory-to-practice. In the Fall semester, the emphasis is on the detection of hearing loss using clinical procedures designed for the adult population, and an introduction to use of the basic audiological test battery for determining the site of lesion (differential diagnosis). In the Winter semester, the emphasis will be on modifications to clinical protocols for special populations, and advanced test protocols. Limitations of the basic, detection oriented battery will also be reviewed. Students will learn through a variety of formats that support knowledge integration and application, including clinical case examples, role-playing, demonstration and hands-on experience with clinical equipment and protocols.

9512 Acoustics, Perception, & the Auditory System

Focus Area: Hearing Science, Physiology, Disorders

This course provides an introductory background for understanding sound, its propagation, and the acoustics of rooms and the external ear. Signal filtering and representations in time and frequency domains will be introduced. Anatomy of the ear and auditory nervous system will be covered, as well as the function of these systems in the processing of sound. Perception and psychophysics, as well as sound localization will also be studied.

9513 Electronics and Instrumentation

Focus Area: Hearing Technologies

This course will cover fundamentals of electricity, electronics, and, digital signal processing within the context of audiological instrumentation (sound level meters, audiometers, OAE equipment, tympanometers, hearing aid analysers). Students will also learn to calibrate and troubleshoot audiological instrumentation.

9515 SLP for Audiology

Focus Area: SLP Minor Area

Exploration of phonological, lexical syntactic-morphological, and pragmatic aspects of human communication associated with speech, language, hearing, and related disorders, normal processes of speech and language comprehension and production over the life span.

9516 Auditory Evoked Potentials and Emissions

Focus Area: Hearing Science, Physiology, Disorders

This course will cover foundational knowledge for objective physiological measurement of the auditory system using auditory evoked potentials and otoacoustic emissions. Basics common to these measurements will be treated including introductory signal processing (filtering, averaging, time domain and spectral analysis), and the types of acoustic stimuli and their calibration.

9517 Physiological Measurement

Focus Area: Hearing Science, Physiology, Disorders

This course will cover practical use of physiological measurements of the auditory system. This will include otoacoustic emissions and auditory evoked potentials elicited from different levels of the auditory nervous system. Measurement setup, data collection, data interpretation, and report writing will be performed.

9518 Foundations of Assistive Hearing Technologies

Focus Area: Hearing Technologies

This course will orient students to hearing technologies that assist persons with hearing impairment (hearing aids, assistive listening and alerting devices, implantable technologies). Training in digital signal processing will introduce functions within modern hearing aids. Hands-on training will cover procedures for prescribing and verifying and troubleshooting hearing aids in adults.

9519 Module Noise 1

In this module, the effects of noise, both auditory and non-auditory, will be reviewed and the mechanisms and clinical features of noise-induced hearing loss will be introduced. Occupational noise exposure legislation and conservation programs, both occupational and non-occupational, will be covered in detail.

9522 Professional Practice II

Focus Area: Clinical-Professional

This course builds on CSD9520a and provides students with practical content that will assist with entry to clinical practice. Topic areas include: clinical record-keeping, cerumen management, infection control, earmold impressions and modifications, FM fitting and hearing aid dispensing including supporting clients with accessing funding programs (including application forms), and booking and etiquette of working with interpreters including sign language interpreters. Students will be provided with appropriate instruction to assist in their preparation for their first

external clinical placements during the summer term, and oriented to procedures for documentation of required practicum hours across the program.

9523 Professional Practice III

Focus Area: Clinical-Professional

The objective of this course will be to expand students understanding of evidence-based practice, ethics in practice, and the importance of using evidence in practice. An introduction to knowledge translation and implementation science will also be provided in an effort to improve their understanding of strategies to create knowledge and implement this knowledge into practice. Students will be provided an opportunity to participate in research laboratory experiences, small research studies or reviews of audiology literature. Students will present their work at the CSD Poster Day and/or in classroom presentations. This course will also review professional practice competencies to assist students for their final clinical placement and transition to audiology practice after graduation.

9525 Pediatric Hearing Disorders: Development and Assessment

Focus Area: Hearing Science, Physiology, Disorders

This course will provide knowledge of the normal and disordered development of both hearing and the auditory pathways, as a scientific foundation for modern assessment procedures in pediatric audiology. The impact of teratogenic, congenital, and/or genetic anomalies on the normal development of the hearing system will be introduced. Protocols for clinical pediatric assessment will be taught in specific areas including high frequency tympanometry, and assessment of Auditory Processing Disorder and Auditory Neuropathy Spectrum Disorder. Case studies will be used to build emerging competence in integrating results across a test battery.

9526 Modern Practices in Assistive Hearing Technologies II

Focus Area: Hearing Technologies

This course will support advanced clinical practice in prescribing and verifying hearing aids, with an emphasis on evidence-based use of procedures and technologies. Advanced knowledge of the scientific foundations underlying current clinical practice will be supported and expected. Reading and discussion of evidence and modern protocols will critically evaluate advanced procedures in real ear measurement, prescription, electroacoustic evaluation of DSP, and outcome measurement.

9527 Modern Practices in Assistive Hearing Technologies I : (Implantable Devices)

Focus Area: Hearing Technologies

This course will cover core knowledge of physiology, psychophysics, technology, and clinical practice implantable hearing technologies, with a focus on cochlear implants. The course combines lectures, psychophysical and practical laboratory activities, and clinical observation.

9528 Applications in Assistive Hearing Technologies II

Focus Area: Hearing Technologies

This course will support advanced clinical practice in prescribing and verifying hearing aids, with an emphasis on evidence-based use of procedures and technologies. This course will train advanced practice procedures in hearing aid prescription, technology selection, and technology evaluation, and dispensing, with a focus on practice with the pediatric population and advanced technologies. Hands on activities with simulated patients, clinical observation with reflection, portfolio building, and training on administrative procedures (forms, protocols) will build practical skills in these areas of practice.

9529 Module Instrumentation and Calibration

In this module, students will acquire advanced skills through practical activities using various types of instrumentation and performing calibration. Experiential learning using sound level meters and through the calibration of audiometers, emittance, otoacoustic emissions and real ear measurement equipment will be achieved in this final applications course.

9530 Adult Hearing Disorders

Focus Area: Hearing Science, Physiology, Disorders

This course will approach hearing disorders from a broad perspective, beginning with pathophysiology and etiology and encompassing medical and audiological approaches to assessment, diagnosis, and treatment. The focus will be on the adult population.

9532 Counseling

Focus Area: Clinical-Professional

This course will provide an in-depth overview of foundations of counseling for adults and children with hearing, vestibular and tinnitus disorders and their families. Counseling approaches designed to maximize a patient's ability to understand, adapt and cope with a hearing loss will be discussed.

9533 Module Noise 2

In this module, the focus is on theory-to-practice and covers issues related to noise in occupational and non-occupational settings, including educational facilities. Noise control, noise exposure measurement, hearing loss prevention through personal hearing protection, and room acoustics including noise issues related to the educational setting will be covered. Public education programs relating to noise will also be incorporated into this learning experience.

9534 Introduction to Assessment and Management of the Vestibular System

Focus Area: Hearing Science, Physiology, Disorders

Students will gain a comprehensive understanding of the anatomy, physiology, and pathology of not only the vestibular system but also the ocular system and balance

mechanisms. This course also provides an extensive overview of vestibular testing techniques, including bedside assessments, videonystagmography, caloric testing, rotary chair testing, posturography, vestibular evoked myogenic potentials, and video head impulse test. Students will also learn how to interpret test results, conduct analysis, and explore therapeutic approaches such as vestibular rehabilitation therapy (VRT) and canalith repositioning maneuvers. Furthermore, the course covers assessments of fall risks, fostering discussions and evaluations within the learning process.

9535 Aural (Re)Habilitation: Theory-to-Practice I

Focus Area: Clinical-Professional

This course focuses on the foundations of aural (re)habilitation (AR) theory and practice, with a focus on deaf, deafened, and hard of hearing adults. Professional competencies, scope of practice, and assessment and management techniques will be discussed. The role of the audiologist in the provision of these services, and in partnership with other professionals, and consumer-based organizations will be explored.

9536 Aural (Re)Habilitation: Theory-to-Practice II

Focus Area: Clinical-Professional

This course focuses on the theory, practice and issues related to the provision of aural (re)habilitative (AR) services with a focus on deaf, deafened, and hard of hearing children. Professional competencies and scope of practice in the assessment and management of children with hearing loss will be discussed. The role of the audiologist in the provision of these services, and in partnership other professionals, with infant and preschool services, elementary and high school hearing resource programs, school board audiologists,
teachers of the deaf and hard of hearing, and consumer based organizations will be explored.

9615 Speech Science

Focus Area: SLP Minor Area

Students are introduced to the physiologic, acoustic and perceptual characteristics of speech. Principles and methods for the laboratory study of speech are explored.

9625 Clinical Applications in Speech Science

Focus Area: SLP Minor Area

Students use computer-based procedures to obtain basic physiologic and acoustic measures of normal and disordered speech.

9801 Professional Practice

This course will prepare students for professional practice as an autonomous regulated healthcare practitioner in ever-changing and complex practice environments. Through interprofessional education (IPE), students from the Schools of Communication Sciences & Disorders, Occupational Therapy and Physical

Therapy will be introduced to the concepts of professionalism and to the attitudes, values, competencies and accountabilities associated with being a regulated healthcare professional. Students will develop capabilities for reflective practice, professional reasoning and explore how to enact professional behaviours in relation to the client, the interprofessional team, organizational environments, professional associations and regulatory bodies.

9802 Critical Appraisal

This course is designed to provide health disciplines professional students with the knowledge base and opportunities to develop the skills required to critically appraise a diverse range of research methodologies and clinical literature.