

Descriptions of Practicum Preparation from Course Work Audiology

<u>COURSE#</u>	<u>YEAR 1 – FALL TERM</u>
HUCD5050	Fundamentals of Speech Science
HUCD5130	Introduction to Audiology and Speech-Language Pathology
HUCD5150	Speech and Language Acquisition
HUCD5290	Introduction to Neurosciences for Communication Disorders
HUCD6310	Audition I
IPHE5900	Interprofessional Health Education Portfolio

HUCD5050: Fundamentals of Speech Science

Students gain familiarity with using speech instrumentation including electroglottography and nasometry.

HUCD5050: Introduction to Audiology and Speech-Language Pathology

Students gain familiarity with the World Health Organization's International Classification of Functioning, Disability, and Health and begin to apply it to persons with communication disorders. They are introduced to the SAC Code of Ethics and begin to learn about ethical issues in professional practice. They complete an online interprofessional education module with Social Work students to think more critically about their interactions with clients and co-workers from diverse backgrounds.

HUCD5150: Speech and Language Acquisition

Students complete assignments that include collecting, transcribing, analyzing, and interpreting a language sample (including discussing how the process and interpretation would change if done in a language other than English), demonstrating mastery of the morphosyntax of English, and completing a case study where students are expected to research and participate in a class discussion about children with a variety of language disorders from diverse backgrounds. Students also complete observations and write-ups of typically developing children of various ages and watch videotapes of children with typical development from infancy through adolescence in class.

IPHE5900: Interprofessional Health Education Portfolio

This course is intended to prepare students to work in collaborative and patient/client/family/ community-centered work environments. The student will be required to have completed, by the end of their program of study, six different meaningful and relevant interprofessional collaborative learning experiences (as determined and approved by the School). The experiences will include interactions with undergraduate and/or graduate students from a total of at least four different related professions with which there are natural affinities or linkages in the professional environment, some professions of which are outside the student's home School. At least one of these experiences will be in a practice setting.

<u>COURSE#</u>	<u>YEAR 1 – WINTER TERM</u>
HUCD5020	Phonetics
HUCD5120	Hearing Measurement
HUCD5260	Hearing Disorders
HUCD6350	Audition II
HUCD6980	Research Design
IPHE5900	Interprofessional Health Education Portfolio Pre-Practicum Experience

HUCD5020: Phonetics

Students complete assignments that include transcribing and analyzing the phonetics/phonology of non-native speaker of English and practicing broad and narrow transcription with typically developing adults and children, as well as children with speech disorders. Students also practice using speech instrumentation such as speech analysis equipment (e.g., CSL) and software (e.g., Praat).

HUCD5120: Hearing Measurement

Students participate in labs that help to solidify theory and provide experience with the most common tests in the audiology battery. The lab work has four basic components: an introduction to the equipment by the teaching assistant (TA), review of the procedures by the TA, supervised hands-on experience, and collection of results (and interpretations) for a lab measures portfolio. The topics covered by the labs include: air and bone conduction audiometry, speech audiometry, the immittance battery, and otoacoustic emissions.

HUCD5260: Hearing Disorders

Students practice using tuning forks and otoscopes in class. They also have an elective opportunity to observe pediatric ENT clinics and/or surgeries at the IWK Health Centre.

HUCD6980: Research Design

This course involves an overview of research design and statistical methods, with a focus on Evidence-based Practice (EBP). In addition to examinations, the students critique a research study that investigates either an assessment tool or intervention applying the principles of EBP that we have discussed in class.

Pre-Practicum

Students participate in speech-language-literacy and hearing screenings in community settings under the supervision of SHCD Faculty. Screenings are completed over one week following completion of winter term examinations. Students also participate in interprofessional case discussions following the screenings.

COURSE#**YEAR 2 – FALL TERM**

HUCD5063	Clinical Methods – Part I
HUCD5140	Aural (Re)Habilitation with Children
HUCD5220	Diagnostic Audiology
HUCD6320	Pediatric Audiology
HUCD6360	Amplification I
HUCD6440	Noise in Industry and the Community – offered every other year beginning Fall 2012
IPHE5900	Interprofessional Health Education Portfolio

HUCD5063: Clinical Methods – Part I

Procedural skills in audiology are discussed and practiced in class. The practice activities focus on development of observation skills and self-assessment. Students discuss patient management issues related to treatment, follow-up and referral stream.

HUCD5140: Aural (Re)Habilitation with Children

In-class panel discussions provide students with the opportunity to learn about family and client perspectives on the experience of having a hearing impairment or having a family member with a hearing impairment.

HUCD5220: Diagnostic Audiology

Students complete hands-on laboratory exercises in the following areas: pure tone air and bone conduction audiometry, speech audiometry, audiometric masking, immittance measures including tympanometry and acoustic reflexes, and advanced testing (e.g., the Stenger test).

HUCD6320: Pediatric Audiology

Students complete observations in Newborn Hearing Screening, becoming familiar with the screening process, including data management procedures, OAE and AABR screening, and reporting results to parents. They also complete observations in a pediatric audiology clinic and then discuss the experience with the class as a whole and relate it to discussions during lectures.

HUCD6360: Amplification I

The first course on amplification is aimed at familiarizing students with hearing aid components and electroacoustic properties, principles of hearing aid selection and fitting methods, and verification of hearing aid fitting using real-ear measures. Hearing aids with entry level and intermediate technology will be used in this course. Advanced hearing aid technology and fitting of high-end instruments will be covered in HUCD5240 and HUCD6640. By the end of the course, students should be able to have the following clinical skills: determine hearing aid candidacy, gather relevant information

on listening needs and daily activities to determine hearing aid fitting goals, select a particular hearing aid model for a patient's hearing loss and listening needs (with help), navigate through Noah and some manufacturers' fitting software, perform listening checks and trouble shoot faulty hearing aids, perform ANSI tests and interpret the results, obtain RECD measures, and program some entry level hearing aid models and verify the performance with real-ear measures. Students also participate in labs that help to familiarize them with hearing aid components and troubleshooting faulty hearing aid, electroacoustic analysis (ANSI tests), real-ear to 2-cc coupler difference (RECD), hearing aid selection and real-ear verification of NAL-NL targets, and pediatric hearing aid selection and verification of DSL[i/o] REAR targets using S-REM.

HUCD6440: Noise in Industry and the Community

Students participate in the following practical activities: installation of an FM sound field amplification system, sound level measurement, analysis, and report generating activities in classrooms, air-handling areas, a commercial laundry facility, a facility that mills flour, and of traffic on Halifax streets, and calibration of the SHCD clinical audiometer, including calibration of the earphones, bone conductor, and sound field speakers, through the use of sound level meters, appropriate couplers, frequency meters, etc.

<u>COURSE#</u>	<u>YEAR 2 – WINTER TERM</u>
HUCD5063	Clinical Methods – Part II
HUCD5240	Aural Rehabilitation – Adults (Amplification II)
HUCD6070	Topics in Audiology Procedures
HUCD6380	Electrophysiological Audiometric Measures
HUCD7001	Research Project
IPHE5900	Interprofessional Health Education Portfolio

HUCD5063: Clinical Methods – Part II

Client counselling and interviewing skills are discussed and practiced in class. Students review and critique videotapes demonstrating counselling techniques, practice counselling techniques in class, participate in small group role-plays that simulate a counselling session, and participate, in pairs, in a counselling simulation session through the Learning Resource Centre and review their videotaped session for self-analysis.

HUCD5240 : Aural Rehabilitation – Adults (Amplification II)

The first part of this course is a follow-up from Amplification I (HUCD 6360) and covers more advanced amplification issues. The second part of the course addresses post-fitting audiological rehabilitation of adults with hearing loss and their families, including hearing aid orientation and adjustment, communication management, speechreading, planning and provision of audiological rehabilitation services, and outcome measures. By the end of the course, students should demonstrate the following clinical skills: apply information obtained from hearing needs assessment to the selection of the most appropriate hearing aid technology for a given patient, take ear impressions and select earmold style, material, and shell options, identify strategies to deal with shell/earmold comfort issues and to help resolve acoustic feedback, program high-end hearing aids to meet patients' needs and verify the performance using REM, verify the performance of hearing aid features using 2-cc measures, identify appropriate fine-tuning solutions for dealing with patients' complaints about hearing aid performance, recommend hearing aid accessories and some assistive listening devices. Students also participate in labs/workshops that help to familiarize them with taking ear impressions, fitting compression parameters, programming and fine-tuning high-end hearing aids, and cerumen management.

HUCD6070: Topics in Audiology Procedures

Four lectures are provided to help students become familiar with equipment used in clinical audiology practice. These lectures include labs to provide students with basic knowledge regarding the components and organization of the equipment and very basic electronic knowledge related to input/output, properties of transducers, etc. Students are also provided with some knowledge of calibration of acoustic systems, and of improving the signal/noise ratio in electronic recording systems. Six lectures will cover the basic anatomy and physiology of the vestibular system, as well as, vestibular function, disorders, testing, and rehabilitation. Vestibular tests will focus on Videonystagmography, Rotary Chair Testing, Computerized Dynamic Posturography, and Vestibular Evoked Myogenic Potentials (VEMP) testing. These lectures include two hands-on lab sessions at the Nova Scotia Hearing and Speech Centres Dickson Building site.

HUCD6380: Electrophysiological Audiometric Measures

Students complete hands-on laboratory exercises on the following topics: transient and distortion-product otoacoustic emissions, auditory brainstem response, auditory steady-state response, auditory middle-latency response, and auditory long-latency response. All laboratory exercises include subject preparation, response measurement, response analysis and interpretation.

COURSE#

HUCD7061

YEAR 2 – SPRING/SUMMER TERM

Internship Practicum (full-time, 12-week placement)

COURSE#

HUCD6420

HUCD6440

HUCD6630

HUCD6640

HUCD7002

YEAR 3 – FALL TERM

Advanced Diagnostic Audiology

Noise in Industry and the Community – offered every other year beginning Fall 2012

Cochlear Implants and Other Implantable Technologies

Advanced Audiologic Rehabilitation

Research Project

HUCD6420: Advanced Diagnostic Audiology

Students observe/participate in testing and remediation of APD/advanced diagnostic cases through sheltered practicum. In particular they will: obtain case history information as it relates to auditory processing, utilize behavioural and electrophysiological advanced diagnostic tests, including audiological set up, test administration and scoring, provide rehabilitation techniques covering environmental, compensatory, and auditory training processes, and learn counselling strategies to utilize with this population. Students may have opportunities to interact with other health care professionals (ie, ENT, Psychologists, SLPs, etc) as they impart our clinical findings and to write letters of support or interpretation of test findings and its impact on client to employers, schools, etc.

HUCD6440: Noise in Industry and the Community

Student successfully completing the course will have the knowledge, skill, and experience to assess occupational and community noise. The students will be introduced to the methods used to prevent occupational hearing loss and negative impacts of community noise. Through a series of exercises the students will develop the skills to evaluate the probability that occupational noise has contributed to an individual's hearing impairment. Students will participate in labs to familiarize them with sound level equipment and methods used to gather noise level data, evaluate different types of hearing protection in sound field for comparison with the manufacturers published data, review files to determine the likelihood a hearing loss was due to occupational noise, and to develop a tool to assist clinical audiologists in determining the likelihood a hearing loss was due to occupational noise. Small groups of students will also complete or participate in three of the following: one of two debates surrounding issues in industrial and community audiology, development of a presentation on the benefits of a hearing conservation program which is designed to be delivered to an industrial organisation and its workers, sound level measurement and analysis activities at one of two industrial sites and write a hearing conservation report for the organization, program for a school board regarding suitable classroom acoustics for an elementary school, including methods of remediation for a classroom with poor acoustics, and/or a community noise By-Law for a small town in Nova Scotia.

HUCD6630: Cochlear Implants and Other Implantable Devices

Students observe a cochlear-implant activation, as well as, surgical implantation.

HUCD6640: Advanced Audiologic Rehabilitation

Advanced Audiologic Rehabilitation is a follow-up from the Amplification and Adult Aural Rehabilitation courses. It is designed to increase students' knowledge on advanced hearing aid technology, wireless accessories, and remote microphone technologies, and to expand their clinical skills in the fitting of hearing aids and the provision of audiological rehabilitation services post-fitting. A hearing aid user will participate in the class. As a group, students are responsible for providing hearing aid fitting and audiological rehabilitation services to the patient, under supervision. Students are also required to attend various meetings/workshops offered by hearing aid manufacturers on product and software updates. After successfully completing this course, students should be able to independently: apply evidence-based practice when making decisions related to hearing aid technologies and audiological rehabilitation, assess a patient's communication

performance and needs through informal interviews and standardized questionnaires, counsel patients on amplification technology most appropriate for their needs, provide hearing aid orientation, plan and implement an audiological rehabilitation program for a patient, with a focus on communication strategies training, provide auditory training, program hearing aids to match a patient's audiometric results, hearing needs, and lifestyle, verify the performance of hearing aids using real-ear measures and speech-in-noise measures, validate amplification satisfaction and benefit using informal interviews and standardized questionnaires, make appropriate modifications to hearing aids based on patient feedback, fit hearing aid accessories and remote microphone technology and provide counselling on their use, and perform shell modifications and minor hearing aid repairs.

COURSE#
HUCD7062

YEAR 3 – WINTER TERM
Externship Practicum (full-time, 12-week placement)
