

Western University  
School of Communication Sciences & Disorders  
**CommDis 9525b - Pediatric Hearing Development, Assessment and Disorders**  
Winter 2022

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**Meeting times:** New material will be posted by 1:00 on Friday of each week . It is expected that you will use the time from 1 to 230 to review this material and complete any assignments. On Tuesday of each week from 1230 to 2 we will meet either in person (Elborn College room 1543) or synchronously via Zoom.

**Course Description:** This course will overview the normal development of the auditory system and its relation to hearing abilities, as a scientific foundation for assessment of pediatric patients. Advanced procedures for assessment will be taught in specific areas including multi-frequency tympanometry and wide band absorbance, the use of acoustic reflexes and evoked potentials for neurodiagnostics, and advanced behavioural testing. The impact of teratogenic, congenital, and/or genetic anomalies on the normal development of the hearing system will be introduced. Case studies will be used to build emerging competence in integrating results across a test battery.

**Text.** Seewald, R.C. & Tharpe, A.M. (2016). Comprehensive Handbook of Pediatric Audiology, 2<sup>nd</sup> Edition, San Diego: Plural Publishing.

**Course Evaluation:** Participation in discussion forums as well as completion of assignments and exams is required.

Assignments\*: 25%

Midterm: 25%

Participation: 25%

Final: 25%

\*there will be several assignments throughout the term. Some will be graded. Others will be required and graded as pass/fail.

**COURSE CONTENT AND APPROXIMATE SCHEDULE. SEE OWL SITE FOR DETAILS AND LAST-MINUTE CHANGES.**

**Week 1 (Jan 7 & 11)** Introduction, functional anatomy of the conductive mechanism and embryologic development

**Week 2 (Jan 14 & 18)** Conductive hearing disorders & how they alter transmission to the cochlea, review the physics of impedance

**Week 3 (Jan 21 & 25)** Advanced middle ear assessment – the role of probe frequency in Immittance

**Week 4 (Jan 28 & Feb 1)** Wide band absorbance

**Week 5 (Feb 4 & 8)** Acoustic reflexes – patterns is tests, thresholds, calibration & growth functions

**Week 6: (Feb 11 & 15) Midterm**

**Week 7: (Feb18 & 22)** ABR & ECog

**Week 8 (Feb 25 & Mar 1)** Development of the cochlea & CANS

**Week 9 (Mar 4 & 8)** Psychoacoustics

**Week 10 (Mar 11 & 15)** Risk factors for SNHL, Genetic and non-genetic disorders

**Week 11 (Mar 18 & 22)** Auditory neuropathy / spectrum disorder

**Week 12 (Mar 25 & 29)** Auditory Processing Disorders – Review of Leeper clinic’s APD assessment protocol, case studies

**Week 13: (Apr 1)** Review as requested

**Final during exam period**

Additional Information:

### **Health and Wellness**

As part of a successful graduate student experience at Western, we encourage students to make their health and wellness a priority. Western provides several on campus health-related services to help you achieve optimum health and engage in healthy living while pursuing your graduate degree. For example, to support physical activity, all students, as part of their registration, receive membership in Western’s Campus Recreation Centre. Numerous cultural events are offered throughout the year. Please check out the Faculty of Music web page <http://www.music.uwo.ca/>, and our own McIntosh Gallery <http://www.mcintoshgallery.ca/>. Information regarding health- and wellness-related services available to students may be found at <http://www.health.uwo.ca/>

Students seeking help regarding mental health concerns are advised to speak to someone they feel comfortable confiding in, such as their faculty supervisor, their program director (graduate chair), or other relevant administrators in their unit. Campus mental health resources may be found at [http://www.health.uwo.ca/mental\\_health/resources.html](http://www.health.uwo.ca/mental_health/resources.html)

To help you learn more about mental health, Western has developed an interactive mental health learning module, found here:

[http://www.health.uwo.ca/mental\\_health/module.html](http://www.health.uwo.ca/mental_health/module.html). This module is 30 minutes in length and provides participants with a basic understanding of mental health issues and of available campus and community resources. Topics include stress, anxiety, depression, suicide and eating disorders. After successful completion of the module, participants receive a certificate confirming their participation.

### **Academic Offences**

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at:

[http://www.uwo.ca/univsec/handbook/appeals/scholastic\\_discipline\\_grad.pdf](http://www.uwo.ca/univsec/handbook/appeals/scholastic_discipline_grad.pdf)

Additionally, required papers may be subject to submission for textual similarity review to the commercial plagiarism-detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).