McGill | Faculty of Medicine and Health Sciences | School of Communication Sciences and Disorders

2022 FALL

VOICE DISORDERS
SCSD 639
Number of Credits: 3 Credits
Course Time: Monday 8:30 am – 10:30 am; Lab: 10:45 am-11:45 am
Location: Rm 869

Instructor: Nicole LI-JESSEN, Ph.D.

Office: Rm 815
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Office Hours: By appointment (set up by email)
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COURSE OVERVIEW

Voice Disorders is a 3-credit graduate course that provides an overview of voice disorders, including causes, assessment, and treatment across the life span. The course also addresses the role of the speech-language pathologist in the multidisciplinary handling of patients with voice problems.

The general purpose is to provide *rudimentary knowledge and skills* in assessment and treatment of voice problems. The course is designed to provide professional students in speech-language pathology with basic information about (1) the personal and societal relevance of voice problems; (2) pathologies affecting voice; (3) basic approaches to evaluation of voice problems; (4) basic science foundations of voice therapy; (5) models of behavioral, pharmaceutical, and surgical treatment of voice problems.

LEARNING OBJECTIVES/ OUTCOMES (COMPETENCIES)

UNIT ONE: Basic Requirements (Audiology and Speech-Language Pathology)

The audiologist and speech-language pathologist demonstrate basic knowledge of:

1.1 Anatomy and Physiology
1.1.i Respiratory system (respiratory tract, chest wall, diaphragm, and abdominal wall).
1.1.ii Articulatory, phonatory, resonatory, and swallowing systems (larynx, pharynx, mouth, and nose).

1.2 Neuroanatomy and Neurophysiology
1.2.i The structure and function of the nervous system.

1.4 Counselling and Applied Psychology

1.4.i Biopsychosocial frameworks such as the World Health Organization International Classification of Functioning, Disability, and Health; as they relate to communication, swallowing, and balance.

1.4.iii Cultural and linguistic factors that may affect clinical relationships, assessment, and treatment outcomes; including but not limited to race, ethnicity, and gender identity.

1.4.iv The psychosocial effects of communication disorders on the client and significant others, including stigma.

1.4.v The psychosocial effects of health conditions that may include a communication disorder (e.g., stroke, cancer), including the implications of acute versus chronic illness, stable versus progressive conditions, and congenital versus acquired conditions.

1.4.vi Coping mechanisms used by clients/families.

1.4.vii The role of communication in interpersonal relations.

1.4.viii Interviewing and counselling methods for clients, their caregivers, and their significant others, in the context of family-centered care.

1.7 Instrumentation

1.7.i Instrumentation relevant to clinical practice and its operation (e.g., amplification and assistive devices, audiometers, audio and video recorders, voice and speech synthesizers and analyzers, hearing aid analyzers, real-ear measurement systems).

1.7.iii Digital health-related platforms (e.g., online communication platforms, eHealth platforms) used in clinical practice.

1.8 Pharmacology and Other Medical Interventions

1.8.i The effects of medical intervention on auditory function, balance, swallowing, and communication (e.g., medication, radiation, surgery, implanted devices).

1.9 Research Methodology

1.9.v How to critically evaluate research using principles of evidence-based practice.

UNIT TWO: Knowledge Expert

The speech-language pathologist demonstrates knowledge of:

2.5 Voice and its Disorders

2.5.i Anatomy, neuroanatomy, and physiology of the larynx and of normal voice production and laryngeal airway across the lifespan, and application of this knowledge to clinical practice.

2.5.ii Normative data for each dimension of voice production and laryngeal airway across the lifespan (e.g., loudness, pitch, fundamental frequency, resonance, quality) and their application to clinical practice.

2.5.iii Differences between normal and disordered voice production.

2.5.iv Differences between normal and disordered laryngeal airway function (chronic throat clearing, chronic cough, breathing attacks) as they relate to differences between medical etiology and functional etiology (e.g., asthma, reflux, allergies, other medical diagnoses).

2.5.v Factors and processes that may impact voice production (e.g., expression of gender identity, removal of larynx, hearing loss, neuromuscular involvement, musculoskeletal tension, vocal fold pathology, systemic conditions, affective states, environmental factors).
2.5.vi Factors and processes that may impact voice production and laryngeal airway sensitivity (e.g., chronic cough, chronic throat clearing, irritable larynx).
2.5.vii The physiological basis and perceptual and acoustical characteristics of alaryngeal speech and speech produced via esophageal means, tracheoesophageal prostheses, and/or mechanical devices.
2.5.viii The physiological basis and perceptual and acoustical characteristics of speech with individuals who have a tracheostomy.
2.5.ix Characteristic profiles of clients with a diagnosis of organic or nonorganic vocal pathology or laryngeal airway disorders.
2.5.x The psychosocial, educational, and vocational impact of voice or laryngeal airway disorders.

UNIT THREE: Clinical Expert - Cross-Cutting Assessment and Intervention Standards

The speech-language pathologist demonstrates the ability to:

3.1 Identify individuals requiring speech-language pathology services:

3.1.i Collect and review information from relevant sources (e.g., referrals, reports, consultation) to determine an individual's need for a speech-language pathology assessment.
3.1.ii Engage in screening programs (e.g., infant, school-aged, feeding and swallowing) to identify individuals requiring speech-language pathology services.

3.2 Plan, conduct, and adjust an assessment:

3.2.i Collect and analyze pertinent information prior to the assessment, including intake information and previous reports.
3.2.ii Use principles of assessment to develop assessment plans (e.g., tools, strategies, resources, environment) that reflect background information about the client (including personal and environmental factors), known or suspected primary and concomitant disorders (e.g., medical, emotional), knowledge of normal and disordered communication or swallowing as well as risk factors for communication or swallowing disorders; modify this plan when appropriate.
3.2.iii Demonstrate knowledge of principles underlying clinical assessment, including standardized and nonstandardized procedures and their advantages, disadvantages, limitations, representativeness, and applicability to the individual management plan.
3.2.iv Conduct a clinical interview with the client and other pertinent individuals that is relevant to the diagnosis, presenting complaints, and management of the communication or swallowing disorder.
3.2.v Administer valid, accurate, and reliable assessment measures and/or procedures (quantitative and/or qualitative), as appropriate to the client and circumstances, and accurately listen to, observe, and document all responses and observations.
3.2.vi Assess the impact of the client's personal and environmental factors (e.g., coping style, housing) in the client's environment (home, community, school, work) on communication or swallowing needs and effectiveness.

3.3 Analyze and interpret assessment results:

3.3.i Analyze formal, informal, quantitative, and qualitative assessment results, including accurate scoring and interpretation of standardized tests.

3.3.ii Formulate a diagnostic statement about the client's communication or swallowing skills, including the impact on daily activities and educational, vocational, and psychosocial needs; include functional prognosis, as appropriate.

3.4 Develop and share recommendations based on assessment results:

3.4.i Develop evidence-informed recommendations, including potential referrals to other professionals, based on the assessment findings and available resources.

3.4.ii Discuss the assessment results, recommendations, and implications with the client and other relevant individuals, as permitted by the client.

3.5 Develop and implement a realistic, evidence-informed, and measurable intervention plan:

3.5.i Utilize a biopsychosocial framework (e.g., the World Health Organization International Classification of Functioning, Disability, and Health) to establish and prioritize intervention aims that reflect the client's strengths, needs, values, expectations, and constraints.

3.5.ii Develop specific, measurable, realistic, time-limited targets to reach the aims.

3.5.iii Demonstrate knowledge of different approaches to intervention (including assistive devices/systems), the evidence and theoretical bases behind the approaches, their advantages, disadvantages, limitations.

3.5.iv Select and apply an appropriate intervention approach and service delivery model (e.g., periodic review, consultation, facilitator training, direct 1:1 therapy, direct group therapy, home/school program, interdisciplinary therapy) that is applicable to the client context.

3.5.v Develop and implement appropriate clinical activities and environmental supports for meeting treatment targets and facilitating generalization and maintenance of skills and strategies, including use of appropriate modalities, materials, and technologies, use of feedback and modelling, and provision of education, support, training, and counselling to the client, family and/or significant others.

3.5.vi Develop and implement outcome measures to evaluate progress on an ongoing basis.

3.5.vii Modify or discontinue the intervention (goals, approach, service delivery model) in keeping with outcomes and client feedback.

3.5.viii Refer to other healthcare or educational professionals as required; identify and recommend alternative services when client needs are beyond the professional limitations of the speech-language pathologist.

3.5.ix Provide training, tasks, and feedback to support personnel to meet the clinical objectives, as appropriate to the jurisdiction, clinical activity, and individual competencies.

UNIT FOUR: Clinical Expert - Disorder-Specific Assessment and Intervention Standards

The speech-language pathologist demonstrates the ability to:

4.5 Voice and its Disorders

4.5.i Assess voice production and laryngeal airway using appropriate perceptual, physiologic, aerodynamic, and acoustic measures.

4.5.ii Evaluate options for laryngeal sound production when appropriate.

4.5.iii Evaluate options and readiness for voice production after tracheostomy.

4.5.iv Develop evidence-informed recommendations, including potential referrals to other professionals (e.g., otolaryngology, gastroenterology, neurology), based on the assessment findings and available resources.

UNIT FIVE: Communication

The speech-language pathologist and audiologist demonstrate the ability to:

5.1 Communicate respectfully and effectively using appropriate modalities (spoken, written, gestural):

5.1.i Use language appropriate to the client and context, taking into account all aspects of diversity (e.g., age, culture, gender identification, linguistic abilities, education level, cognitive abilities, emotional state).

5.1.ii Employ environmental and communication strategies to minimize barriers to successful communication, including the use of appropriate modes of communication (e.g., spoken, non-verbal, written, sign, electronic) and by using translators/interpreters, as required.

5.1.iii Adapt communication in response to verbal and nonverbal cues from communication partners.

5.1.iv Communicate in a socially appropriate and respectful manner that is comfortable for the client and demonstrates empathy and openness.

5.1.v Participate respectfully in challenging conversations.

5.2 Complete documentation thoroughly and accurately, in a timely manner:

5.2.ii Ensure reports clearly integrate results, client input, analysis, recommendations, goals, and outcomes, in a manner understandable to the target audience(s).

UNIT SIX: Collaboration

The speech-language pathologist and audiologist demonstrate the ability to:

6.1 Establish and maintain effective team collaborations to optimize client outcomes:

6.1.i Interact effectively and positively with all team members.

6.1.ii Communicate one's professional roles, responsibilities, and scope of practice in collaborative interactions.

6.1.iii Recognize and respect the roles and perspectives of other professionals.

6.1.iv Participate actively and respectfully in shared responsibilities and decision-making.

6.2 Collaborate with the client during all stages of care:

6.2.i Engage and support the client in identifying concerns, priorities, values, beliefs, assumptions, expectations, and desires in order to inform assessment and intervention.

6.2.ii Demonstrate respect for the client's rights, dignity, uniqueness, and equal opportunity.

6.2.iii Recognize and adapt to all aspects of client diversity (e.g., age, culture, gender identification, linguistic abilities, education level, cognitive abilities, emotional state).

6.2.iv Promote and support the client's (or substitute decision maker's) participation in decision-making.

INSTRUCTIONAL METHOD

Lectures, laboratory, demonstrations, assignments, and student participation

REQUIRED COURSE MATERIALS

Colton, R. H., Casper, J. K., & Leonard, R. (2011). Understanding Voice Problems: A Physiological Perspective for Diagnosis and Treatment (4th ed). Baltimore, MD: Lippincott Williams & Wilkins. ISBN-10: 1609138740. ISBN-13: 978-1609138745

OPTIONAL COURSE MATERIALS

Additional readings: will be available on myCourses and can be obtained electronically through the McGill libraries.

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Faculty of Medicine and Health Sciences **School of Communication Sciences and Disorders**

Tentative Course Outline and Schedule
(Subject to change depending on student response and needs)

Date	Week	Lecture	Lab	Related Textbook Chapters	Online Modules + KCC Video Assignment [due date]
Sept 12	1	Overview of the Course & Introduction to Voice Problems [9:00 -10:30 a.m.]	Lab 1	Chapter 1	Anatomy #1-2 [09/18]
Sept 19	2	Voice Physiology [9:00 -10:30 a.m.]	Lab 2	Chapter 3, 12	Anatomy #3-4 + KCC 001 [09/25]
Sept 26	3	Voice Physiology [9:00 -10:30 a.m.]	Lab 3	Chapter 13	Anatomy #5-6 [10/02]
Oct 3	4	Voice Evaluation [9:00 -11:45 a.m.]		Chapter 8	VF Pathologies #1-2 + KCC 002 [10/09]
Oct 10		*No Class – Thanksgiving*			
Oct 13 (Thurs)	5	Lab 4 - 5 [9:30 -11:30 a.m.]		Chapter 15	VF Pathologies #3-4 [10/16]
Oct 17	6	Overview of Vocal Fold Pathologies [9:00 -10:30 a.m.]	Lab 6	Chapter 4, 6	Functional VD #1 + KCC 003 [10/23]
Oct 24	7	Overview of Functional Voice Disorders [9:00 -10:30 a.m.]	Lab 7	Chapter 4	Functional VD #2 [10/30]
Oct 31	8	Pediatric Voice Disorder Guest Lecture by Ms. Eugenie Prefontaine [8:30 -10:30 a.m.]	Lab 8	Chapter 5	Neurological VD #1 + KCC 004 [11/6]
Nov 7	9	Overview of Neurological Voice Disorders [9:00 -10:30 a.m.]	Lab 9	Chapter 10	Neurological VD #2 [11/13]
Nov 14	10	Voice Therapy [9:00 -10:30 a.m.]	Lab 10	Chapter 10	KCC 005 [11/20]
Nov 21	11	Laryngectomy Lecture and Lab by Ms. Gina Mills [8:30 -11:45 a.m.]			
Nov 28	12	Laryngectomy Lecture and Lab by Ms. Gina Mills [8:30 -11:45 a.m.]			

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| Dec 5 | 13 | Voice Therapy
[9:00 -10:30 a.m.] | Surgical and Medical
Management of Voice
Disorders
[10:45 – 11:45] | Chapter 7, 9 |
| Dec 7 | | *Take Home Final Exam (Available on MyCourses on Dec 7; Due on Dec 16)* | | |

* Additional readings will be assigned before the class.

EVALUATION

Grades will be determined from the following assignments. Assignment instructions will be given during the course.

Assignment	Competency(ies) Targeted	Expected Performance Level
Online modules (25%)	• Basic knowledge of anatomy and physiology of normal and disordered voice functions.	Advanced beginner
Knowledge and case challenges (40%)	• Basic knowledge of anatomy and physiology of normal and disordered voice functions. • Apply fundamental principles of assessment and treatment of voice disorders in special populations.	Advanced beginner
Final exam (25%)	• Formulate a diagnostic and prognostic statement based on the medical diagnosis, voice assessment and the impact of physical, emotional, vocational, and environmental factors that influence the client's voice production. • Formulate an appropriate treatment plan for the client's voice disorder.	Competent
Voice lab (10%)	• Implement appropriate perceptual and acoustic measures for assessing voice production. • Demonstrate common voice therapy techniques, e.g., resonant voice, straw phonation and laryngeal massage.	Advanced beginner

Online modules (25%)
- Online Modules will be available on myCourses. You are expected to dedicate ~30 minutes to complete these weekly assignments. These modules are made to provide the basic foundation of the class. You will need to complete them sequentially in order to unlock subsequent modules. For example, Module 2 will only become available once you complete Module 1, etc.
- You will need to complete all modules. It is pass/ fail per weekly completion.
- You will see quizzes embedded in some videos. Please ensure that you complete them, and that you watch the videos from start to finish. Otherwise, myCourses will not log your activity. You will not be penalized if you do not get the correct answers on the quizzes. The quizzes are to keep you attentive when viewing the videos and to acquire the necessary knowledge for in-class activities in a timely manner.

Knowledge & case challenges (40%)

- KCC is a video-based assignment. Challenges will be posted in advance on myCourses. You will be assigned to tackle a total of **three challenges** (out of 5) over the course. Please refer to the excel sheet for the group assignment and role assignment (presenter vs reviewer).
- If you are assigned as a presenter,
    - You will need to prepare a **5-minute video** to present the assigned challenge and suggested solutions.
    - A verbal report (video) is sufficient. No written reports are required. However, if you feel some visuals (e.g. ppt) can help explain your ideas, feel free to do so.
    - Please upload your video to the Discussion Board on myCourses. It takes a few seconds to one minute to transform the video and it may not appear right away on the Discussion Board. See separate instruction for video upload.
    - Name your file as "LAST NAME_KCC 00X_QX", e.g., "Smith_KCC 001_Q1".
- If you are assigned as a reviewer, you will need to complete a brief peer-review electronic form for each presenter **within 5 days of the submission due date**. For example, for the week of KCC 001, you will review all three presentations (KCC_001_Q1, KCC_001_Q2, KCC_001_Q3). Peer review form (anonymous): https://bit.ly/2FvakhR
- Everyone is expected to have read all challenges and take notes for their own learning benefits.
- The idea of this learning activity is to refresh and retain knowledge through problem solving and to be an effective communicator. These exercises will also prepare you for the final exam.

Final exam (25%)

- This exam is designed to synthesize the comprehensive knowledge that you have learnt in this course and translate them for clinical solutions.
- This exam contains M.C., short- and long-answer questions related to various clinical situations.

Voice Lab (10%)

- Please refer to the separate document of Voice Lab Outline for details.

McGILL POLICY STATEMENTS

Academic Integrity

McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see www.mcgill.ca/students/srr/honest/) for more information).

L'université McGill attache une haute importance à l'honnêteté académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l'on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon le Code de conduite de l'étudiant et des procédures disciplinaires (pour de plus amples renseignements, veuillez consulter le guide pour l'honnêteté académique de McGill.

Language of Submission

"In accord with McGill University's Charter of Student Rights, students in this course have the right to submit in English or in French any written work that is to be graded. This does not apply to courses in which acquiring proficiency in a language is one of the objectives." *(Approved by Senate on 21 January 2009)*

Conformément à la Charte des droits de l'étudiant de l'Université McGill, chaque étudiant a le droit de soumettre en français ou en anglais tout travail écrit devant être noté, sauf dans le cas des cours dont l'un des objets est la maîtrise d'une langue.

Additional Statements

- The University Student Assessment Policy exists to ensure fair and equitable academic assessment for all students and to protect students from excessive workloads. All students and instructors are encouraged to review this Policy, which addresses multiple aspects and methods of student assessment, e.g., the timing of evaluation due dates and weighting of final examinations.

- The University is committed to maintaining teaching and learning spaces that are respectful and inclusive for all. To this end, offensive, violent, or harmful language arising in contexts such as the following may be cause for disciplinary action:
  - Zoom sessions, including Username (use only your legal or preferred name), virtual backgrounds, "chat" boxes, whiteboard annotations, breakout rooms
  - myCourses discussion fora"

- As the instructor of this course I endeavor to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me and the Office for Students with Disabilities, 514-398-6009.

- Many students may face mental health challenges that can impact not only their academic success but also their ability to thrive in our campus community. Please reach out for support when you need it; many resources are available on-campus, off-campus and online.

- If you have difficulty affording food or if you lack a safe and stable place to live and believe that this may affect your performance in this course, I encourage you to contact the Dean of Students who

can connect you with support services. If you feel comfortable doing so, please let me know as well, so we can discuss how I can best support your learning

- [End-of-course evaluations](#) are one of the ways that McGill works towards maintaining and improving the quality of courses and the student's learning experience. You will be notified by e-mail when the evaluations are available. Please note that a minimum number of responses must be received for results to be available to students.

- In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.

LATE ASSIGNMENTS
Students are expected to complete assignments, exams, and presentations at times assigned by instructors. In the event that a student is unable to complete work on time, s/he should contact the instructor and provide a reason for requesting an extension prior to the deadline.

Instructors will indicate to the student whether their reason is sufficient to warrant an extension. All medical excuses must be followed by a letter from a doctor specific to that particular absence. Unexcused incomplete work (assignment, exams, and presentations) will result in failure or reduction in grade points.

ABSENCE FROM EXAMINATION
Supplemental examination will only be given to students who have a medical certificate, or are absent for religious holidays.