VOICE, RESONANCE, & CRANIOFACIAL DISORDERS (VRCD)
COMD 6810 - 4 semester credit hours

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PREREQUISITES
COMD 3100 Anatomy of the Speech and Hearing Mechanism
COMD 5070 Speech Science

COURSE DESCRIPTION
VRCD is a graduate level course that presents the diagnosis and management of voice, resonance, and craniofacial disorders across the lifespan. As such, it is a comprehensive course, and successful completion will enable the student to work with individuals with voice, resonance, and speech disorders associated with craniofacial disorders in all medical and educational settings. Course lectures are supplemented with practical laboratory experiences using state of the art techniques and equipment. Supplemental readings are taken from the current body of research literature and range from basic anatomy and physiology of the vocal/orofacial mechanism to diagnostic methods and specific management strategies. This course is designed to provide the clinician-in-training with the theoretical base to select appropriate tests, make a differential diagnosis, create a management plan, and evaluate treatment progress. It is not a “cookbook” approach to diagnosis and treatment. The goal of the course is to provide theory-based skills that can be flexibly used across all voice and orofacial-related disorders. Emphasis is on critical thinking, analytic skills, and integration of the evidence base into sound clinical judgment.

Course Schedule
Voice Section (Houtz):
• 9/10 5:00-6:40 pm (exam 1 @ USU, scheduled class time in DE 105 for campus students and at outreach distance education locations for outreach students)
• 9/14, 9/21 & 9/28 (Broadcast) 5:30-8:30 pm
• 10/10 9:00-5:00 (Voice Disorders Center, University of Utah, SLC, UT)
• 10/13 5:00-6:40 pm (exam 3 @ USU same time and location as exam 1)
Resonance Section (Little dementia):
• Tues. & Thurs. 5:00- 6:40 pm (after voice section is completed) beginning Tuesday, Oct. 20

LEARNING OUTCOMES
IDEA Objectives
1. Gaining factual knowledge (terminology, etiologies, and classifications) of the communication disorder of voice and of the resonance, speech and related
disorders associated with cleft palate and other orofacial and craniofacial anomalies.

2. Learning fundamental principles of diagnosis and treatment of voice disorders and of the resonance and speech disorders associated with cleft palate and other orofacial anomalies.

3. Learning to apply course materials (problem solving and clinical decisions).

**ASHA Knowledge and Skills Acquisition Competencies/Course Objectives**

Upon completion of the course, the student will be able to:

- **Describe anatomy and physiology of the vocal and orofacial mechanisms (IV-C)**
- **Describe respiration, phonation, resonance and articulation as related to modulation of voice (IV-C)**
- **Describe neurophysiology of respiration, phonation, and resonance (IV-C)**
- **Identify measurable variables as related to modulation of voice (e.g., acoustic, aerodynamic, perceptual) (IV-C)**
- **Describe lifespan changes including pediatric development of the vocal mechanism and aging influences on respiration, phonation, resonance, articulation (IV-C)**
- **Articulate theories and processes of respiration, phonation, and resonance IV-C)**
- **Identify etiologies and describe characteristics of vocal pathologies (e.g., benign, malignant, and neuropathologic) including incidence and prevalence (IV-C)**
- **Identify the nature of orofacial anomalies and commonly related syndromes, including relevant characteristics and etiologies (IV-C).**
- **Identify and describe the articulation, voice and resonance characteristics of clients who have orofacial anomalies (III-C)**
- **Identify and describe the associated and related problems which frequently occur with orofacial anomalies and commonly related syndromes, i.e. developmental, feeding, otologic, audiologic, psychosocial, educational, dental, orthodontic, language, cognition and phonology (IV-C,IV-D).**
- **Identify the mechanical, acoustic, & aerodynamic effects of structural, neuropathologic, functional/behavioral, idiopathic laryngeal pathologies (IV-C)**
- **Identify high risk populations for voice disorders (e.g., those in specific occupations such as teachers, singers, actors, lawyers; persons with hearing loss, etc) and their specialized evaluation and treatment needs (IV-D)**
- **Recognize the needs of specific and culturally diverse populations (e.g., transgender and transsexual; mutational falsetto; non-English speakers) (IV-C)**
- **Outline and conduct a complete voice evaluation protocol and identify clinically appropriate assessment tools (IV-C)**
  - a. Include history, acoustic and aerodynamic measures, perceptual ratings, imaging, electroglottography (IV-D)
  - b. Interpret subjective and objective voice production data using current literature. (IV-D; IV-B1e)
- **Identify and administer clinically appropriate assessment tools for the diagnose of the articulation and resonance problems of clients who have orofacial anomalies (IV-D; V-B-1-c and e).**
- **Identify techniques for assessing the psychosocial impact of voice disorders across the lifespan (e.g., validated questionnaires) (IV-D)**
• Identify techniques for prevention of voice disorders & promotion of vocal wellness (e.g., vocal hygiene, avoiding phonotrauma) in varied clinical, educational, & corporate settings (IV-D; V-B1a)
• Identify instrumental and non-instrumental treatment approaches for the resonance and articulation disorders of clients who have orofacial anomalies (IV-D; IV-F)
• Identify evidence-based treatment approaches and outcomes to voice disorders: behavioral, medical (including pharmacological), surgical, and combination strategies (IV-D, IV-F)
• Describe/conduct appropriate evaluation procedures for articulation and resonance disorders, including recommendations & referrals (IV-D; V-B1c, e and g)
• Outline and conduct a clinically appropriate alaryngeal voice assessment protocol: including stimulability, insufflation testing, prosthesis fitting, and modality selection (IV-D; V-B1c)
• Describe evidence-based treatment approaches and supportive outcomes to alaryngeal speech production: behavioral, medical (including pharmacological), surgical, and combination strategies (IV-D and F)
• Describe the team concept in the habilitation of individuals (and families) who have orofacial anomalies and of appropriate referral sources (IV-D, F, G and H; V-B1g)

The above competencies are viewed as essential skills that this course is designed to address. These skills will be graded through the scheduled course exams and assignments. Students who are having difficulty establishing these competencies or who need clarification of specific course information should contact the appropriate course instructor as early as possible during the course. It is the student’s responsibility to seek extra help, when needed.

LEARNING RESOURCES

REQUIRED TEXTBOOK & READING MATERIALS

Recommended Textbooks & Reading Materials

COURSE FEE
There is a $30.00 course fee associated with this class. The fee is used, in part, to cover expenses associated with the acoustic, resonance and videostroboscopic labs, purchase of demonstration equipment such as voice amplifiers and electrolarynges, course materials, and honorarium for guest speakers.

LEARNING ACTIVITIES
Voice Section Schedule
The Voice section of the course is designed to facilitate clinical skills related to the assessment and management of children, adolescents and adults with voice disorders. This section will be divided into three portions. The first (online) portion will involve learning essential principles of anatomy and physiology of the vocal mechanism, in order to serve as a foundation for information and skills taught during the second (in-classroom) portion of the course. The second portion will involve three broadcast dates and will present and discuss components of the comprehensive evaluation of patients with structural, neurological and/or functional voice disorders. The third portion will be an all-day class that will present and discuss specific treatment approaches. Participants will have the opportunity to practice evaluation procedures and therapy techniques.

- 6 hours of online instruction (available August 1, 2015) followed by a 1.25 hour proctored examination (Tuesday, September 10, 2015 at 5:00-6:40 [scheduled class time] in DE 105 for campus students, and at outreach distance education testing locations for outreach students).
  - The online instruction is divided into 7 lectures and 1 review session; 45 minutes is allocated for each lecture. With the exception of the video in lecture 7, all of the lectures are PowerPoint presentations, reviewing anatomy and physiology of the voice, with no audio; please review them at your own pace.
- 3 Monday evenings September 14, 21 & 28 at 5:30-8:30 pm broadcast from U of U to USU to Library 154 and distance sites for Outreach students.
- 1 day (9:00 am-5:00 pm) of in-classroom instruction on Saturday, October 10, 2015 at the Voice Disorders Center at the University of Utah (Large Conference Room. Address: Imaging and Neurosciences Center, 729 Arapeen Drive, Salt Lake City 84108. Use SOUTH door entrance. Conference Room is just to the right after entrance; however, parking is limited on SOUTH side of building. You can park on NORTH side and around west side of building. The north side entrance will be locked.). The in-classroom instruction will allow for hands-on training with manual circumlaryngeal and other therapy techniques, laryngeal imaging and acoustic and aerodynamic measures.
  - 9:00-10:15 Exam 2 (content from 9/14 and 9/21 lectures & readings)
  - 10:15-10:30 am break
  - 10:30-12:00 noon lecture/training
  - 12:00-1:00 lunch
  - 1:00-3:00 pm lecture/training
  - 3:00-3:15 pm break
  - 3:15-5:00 pm lecture/training
Voiced Section Requirements

There will be assigned readings associated with each portion of the Voice section of the course. These readings will follow the included outline for the classroom lecture schedule for this section. There will be three (3) examinations given for the Voice section. Exam 1 and 3 will be proctored in your Distance Education location (on campus or at your distance site) during the assigned class time (5:00-6:40 p.m.) and Exam 2 at 9:00 at the beginning of the class (9:00 am) during the all-day instruction at the U of U, in Salt Lake City as follows:

1. **EXAM 1 (Online Portion; 50 points):** Thursday, September 10
2. **EXAM 2 (Content from 9/14 & 9/21 lectures & readings; 75 points):** Saturday, October 10 (9:00 am at U of U)
3. **EXAM 3 (Content from 9/28 & 10/10 lectures & readings; 75 points):** Tuesday, October 13 (No longer October 15)

These examinations will be mixed in nature. Each exam will be partially “objective” (i.e., multiple choice, true/false) and “subjective” (short answer/essay). They will require you to integrate your knowledge. The exams will require recall level of knowledge (not just recognition). That is, students should learn material such that they can recall terms and concepts independently, without a list or other mechanism to choose from. Each examination will include questions pertaining to information exclusively covered in the readings (approximately 10% of the examination).

COURSE GRADES

Your course grade is based on the following:

Course Assignments

Reading assignments will be a combination of chapters from the required textbooks and seminal, primary research articles that will be available on the COMD 6810 Canvas page. The instructors may also put additional, current research articles on Canvas as supplemental material that will not be discussed in class but that would enhance your understanding of the diagnosis and management of voice, resonance, and craniofacial disorders. The supplemental materials will be listed in each module when present. Please take advantage of this opportunity to access current information. Check the "supplemental materials" section in each module.

It is critical that students keep up with the assigned readings in order to be vital participants in class discussions. Please come to lectures with reading assignment completed for that day. If there is an associated PowerPoint lecture in Canvas, have it downloaded and available for note-taking.

Grading Scheme

Grading in this graduate level course is NOT done on a curve. Material presented in this class is essential to becoming a competent professional in the field of communicative disorders and, as such, is viewed as a needed knowledge base by each student. The following university approved grading scale will be used:

- **A** 100% to 94%
A- < 94% to 90%
B+ < 90% to 87%
B < 87% to 84%
B- < 84% to 80%
C+ < 80% to 77%
C < 77% to 74%
C- < 74% to 70%
D+ < 70% to 67%
D < 67% to 64%
D- < 64% to 61%
F < 61% to 0%

WEEKLY BREAKDOWN
Voice Section
The following breakdown is a general overview of topics by week for the Voice section of the course. They are tentative and may be altered based on class progress at the discretion of the professor. The weekly modules for the Resonance section of the course will be provided at the start of that section of the course.

- Topical Outline for Phonation Section (Online Instruction):
  - Lecture 1—Laryngeal Framework (part 1)
  - Lecture 2—Laryngeal Framework (part 2)
  - Lecture 3—Intrinsic Muscles of the Larynx
  - Lecture 5—Physiology (part 1)
  - Lecture 6—Physiology (part 1)
  - Lecture 7—Video (anatomy & physiology of the larynx), includes audio
  - Lecture 8—Exam 1 Review
  - Text: Stemple, Roy, & Klaben: Chapters 1-2

- Topical Outline for Phonation Section (Broadcast and In-Classroom Instruction):
  - Day 1/Sept 14 Overview of Voice Disorders: Range & Variety; Non-Instrumental Voice Assessment (Case History, Auditory-Perceptual Evaluation, Psychological Considerations in Assessment & Management; Instrumental Voice Assessment (Audio recording, Laryngeal Imaging, Acoustic & Physiologic Assessment); Organic Voice Disorders, Benign Lesions of the Vocal Folds, Phonotrauma (Voice Misuse & Abuse)
    - Stemple, Roy, & Klaben: Chapters 3, 4
  - Day 2/Sept 21 Functional/Muscle Tension Dysphonia; Neurological Voice Disorders (Spasmodic Dysphonia, Essential Tremor); Differential Diagnosis (SD vs. MTD), Surgical, Medical & Behavioral Management of SD.
    - Stemple, Roy, & Klaben: Chapters 5, 6
  - Day 3/Sept 28 Neuroanatomy of the Vocal Mechanism; Unilateral Vocal Fold Paralysis (including Surgical & Behavioral Management); Parkinson’s Disease & Lee Silverman Voice Treatment (LSVT); Paradoxical Vocal Cord Dysfunction (PVCD)/Chronic Cough/Irritable Larynx Syndrome.
    - Stemple, Roy, & Klaben: Chapter 7
  - Day 4/Oct 10 (all day) Exam 2 (content from 9/14, 9/21); Role of Voice Therapy, Treatment Techniques/Demonstrations (Vocal Hygiene, Vocal Function
  o Stemple, Roy, & Klaben: Chapter 7

Resonance & Craniofacial Disorders Section

Week Eight Readings: Kummer, Chapters 1, 2, & 23
  Orientation to Resonance and Orofacial Disorders Section of Course
  Introduction to Orofacial Anomalies
  Lab #1: Cleft Classification is open. Due on Nov. 3
  Prevalence, Types and Etiologies of Clefts
  Lab #2: Syndromes is open. Due on Nov. 5

Week Nine Readings: Kummer, Chap. 3, 4, 5 and Appendix 5-1 & 5-2
  Normal V-P Function and Anatomy of Pharyngeal Structure
  Velopharyngeal Inadequacies
  Velopharyngeal Inadequacies (Cont.)
  Facial Growth

Week Ten Readings: Kummer, Chap. 8, 9 & 22 & Appendix A & B
  Parental Needs & Concerns
  Feeding Issues with Orofacial Anomalies
  Dental and Audiological Issues
  The Cleft Palate Team

Week Eleven Readings: Kummer, Chap. 6, and 10
  Developmental Aspects of Speech, Language & Cognition
  Psychosocial Aspects
  EXAM # 1: Outreach students in course will take Exam #1 at their distance instruction

Week Twelve Readings: Kummer, Chap. 18, 19, 20 and 7
  Initial & Secondary Surgical Repair for Orofacial Anomalies
  Orthodontic and Prosthetic Treatments
  Student Presentation Assignments given to class members
  Speech, Resonance and Voice Characteristics of Speakers with Orofacial Anomalies
  Lab #3: Speech Characteristics open. Due on Dec. 3

Week Thirteen Readings: Kummer, Chap. 11, 12 and 13
  Screening and Evaluation of Speech and Resonance Problems in Individuals with Orofaci
  No Class: Thanksgiving Holiday

Week Fourteen Readings: Kummer, Chap. 14, 15, and 21
  Instrumental Evaluation and Diagnosis of Velopharyngeal Competency
  Speech Treatment for Clients with Orofacial Anomalies & Related Disorders
  Speech Treatment (Cont.)

Week Fifteen Readings: Kummer, Chap. 16, and 17
UNIVERSITY POLICIES & PROCEDURES

Academic Freedom and Professional Responsibilities

Academic freedom is the right to teach, study, discuss, investigate, discover, create, and publish freely. Academic freedom protects the rights of faculty members in teaching and of students in learning. Freedom in research is fundamental to the advancement of truth. Faculty members are entitled to full freedom in teaching, research, and creative activities, subject to the limitations imposed by professional responsibility. Faculty Code Policy #403 (Links to an external site.) further defines academic freedom and professional responsibilities.

Academic Integrity – "The Honor System"

Each student has the right and duty to pursue his or her academic experience free of dishonesty. The Honor System is designed to establish the higher level of conduct expected and required of all Utah State University students. The Honor Pledge (Links to an external site.): To enhance the learning environment at Utah State University and to develop student academic integrity, each student agrees to the following Honor Pledge:

"I pledge, on my honor, to conduct myself with the foremost level of academic integrity."

A student who lives by the Honor Pledge is a student who does more than not cheat, falsify, or plagiarize. A student who lives by the Honor Pledge:

- Espouses academic integrity as an underlying and essential principle of the Utah State University community;
- Understands that each act of academic dishonesty devalues every degree that is awarded by this institution; and
- Is a welcomed and valued member of Utah State University.

Academic Dishonesty

The instructor of this course will take appropriate actions in response to Academic Dishonesty, as defined the University’s Student Code. Acts of academic dishonesty include but are not limited to:

- **Cheating**: using, attempting to use, or providing others with any unauthorized assistance in taking quizzes, tests, examinations, or in any other academic exercise or activity. Unauthorized assistance includes:
  - Working in a group when the instructor has designated that the quiz, test, examination, or any other academic exercise or activity be done “individually;”
Depending on the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments;

- Substituting for another student, or permitting another student to substitute for oneself, in taking an examination or preparing academic work;
- Acquiring tests or other academic material belonging to a faculty member, staff member, or another student without express permission;
- Continuing to write after time has been called on a quiz, test, examination, or any other academic exercise or activity;
- Submitting substantially the same work for credit in more than one class, except with prior approval of the instructor; or engaging in any form of research fraud.

- **Falsification**: altering or fabricating any information or citation in an academic exercise or activity.
- **Plagiarism**: representing, by paraphrase or direct quotation, the published or unpublished work of another person as one’s own in any academic exercise or activity without full and clear acknowledgment. It also includes using materials prepared by another person or by an agency engaged in the sale of term papers or other academic materials.

**Sexual Harassment**
Sexual harassment is defined by the Affirmative Action/Equal Employment Opportunity Commission as any "unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature." If you feel you are a victim of sexual harassment, you may talk to or file a complaint with the Affirmative Action/Equal Employment Opportunity Office located in Old Main, Room 161, or call the AA/EEO Office at (435) 797-1266.

**Withdrawal Policy and "I" Grade Policy**
Students are required to complete all courses for which they are registered by the end of the semester. In some cases, a student may be unable to complete all of the coursework because of extenuating circumstances, but not due to poor performance or to retain financial aid. The term ‘extenuating’ circumstances includes: (1) incapacitating illness which prevents a student from attending classes for a minimum period of two weeks, (2) a death in the immediate family, (3) financial responsibilities requiring a student to alter a work schedule to secure employment, (4) change in work schedule as required by an employer, or (5) other emergencies deemed appropriate by the instructor.

**Students with Disabilities**
Students with ADA-documented physical, sensory, emotional or medical impairments may be eligible for reasonable accommodations. Veterans may also be eligible for services. All accommodations are coordinated through the Disability Resource Center (DRC). Please contact the DRC prior to or as early in the semester as possible. Alternate formats for course content are available with advanced notice.

**Contacting the Disability Resource Center (DRC):**
- On Campus: Room 101 of the University Inn
- Phone: 435-797-2444
- Website: [http://www.usu.edu/drc/](http://www.usu.edu/drc/)

**Disability related resources for current students:**
- [DRC Student Handbook](http://www.usu.edu/drc/)
- [Deaf and Hard of Hearing Student Handbook](http://www.usu.edu/drc/)
- [Disability Related Scholarships](http://www.usu.edu/drc/)
• Campus Resources (Links to an external site.)
• Documentation Guidelines (Links to an external site.)
• Online Resources for Students with Disabilities (Links to an external site.)

Diversity Statement
Regardless of intent, careless or ill-informed remarks can be offensive and hurtful to others and detract from the learning climate. If you feel uncomfortable in a classroom due to offensive language or actions by an instructor or student(s) regarding ethnicity, gender, or sexual orientation, contact:

• Student Services: http://www.usu.edu/studentservices/ (Links to an external site.), 435.797.1712, studentservices@usu.edu, TSC 220
• Student Advocates: http://www.usu.edu/ususa/legal/ (Links to an external site.), 435.797.2912, TSC 340,
• Access and Diversity: http://www.usu.edu/accesscenter/ (Links to an external site.), 435.797.1728, access@usu.edu; TSC 315
• Multicultural Programs: http://www.usu.edu/accesscenter/multiculture/ (Links to an external site.), 435-797-1728, TSC 315
• LGBTQA Programs: http://www.usu.edu/accesscenter/lgbtqa/ (Links to an external site.), 435-797-GAYS, TSC 314
• Provost's Office Diversity Resources: http://www.usu.edu/provost/faculty/diversity/ (Links to an external site.), (435) 797-8176

You can learn about your student rights by visiting:
The Code of Policies and Procedures for Students at Utah State University: http://www.usu.edu/studentservices/studentcode/ (Links to an external site.)

Grievance Process
Students who feel they have been unfairly treated may file a grievance through the channels and procedures described in the Student Code: Article VII. Grievances (Links to an external site.).

Full details for USU Academic Policies and Procedures can be found at:

• Student Conduct (Links to an external site.)
• Student Code (Links to an external site.)
• Academic Integrity
• USU Selected Academic Policies and Procedures (Links to an external site.)
• USU Academic Policies and Procedures (Links to an external site.)
• Academic Freedom and Professional Responsibility Policy (Links to an external site.)

Emergency Procedures
In the case of a drill or real emergency, classes will be notified to evacuate the building by the sound of the fire/emergency alarm system or by a building representative. In the event of a disaster that may interfere with either notification, evacuate as the situation dictates (i.e., in an earthquake when shaking ceases or immediately when a fire is discovered). Turn off computers and take any personal items with you. Elevators should not be used; instead, use the closest stairs.