CD 660 Structural and Neurogenic Speech Disorders

Course Readings:

Recommended Textbooks:

Duffy (2012). Motor Speech Disorders: Substrates, Differential Diagnosis, and Management (3rd Ed).

Freed (2010). *Motor speech disorders: Diagnosis and treatment* (2nd Ed). San Diego, CA: Delmar Cengage Learning.

Peterson-Falzone (2005): The Clinician's Guide to treating cleft palate speech.

Other required readings: (Additional readings may also be posted by the instructor in Moodle)

Clark, H.M. (2003). Neuromuscular treatments for speech and swallowing: A tutorial. *American Journal of Speech-Language Patholog*y, 12, 400-415.

Clark, H.M. (2005). Clinical decision making and oral motor treatments. *The ASHA Leader*, 8-9, 34-35.

Kent, R.D. (2000). Research on speech motor control and its disorders: A review and prospective. *Journal of Communication Disorders*, 33, 391-428.

Kent, R.D. (2004). Uniqueness of Speech among motor systems. *Clinical Linguistics and Phonetics*, 18, 495-505.

Yorkston, K.M. (1996). Treatment efficacy: Dysarthria. *Journal of Speech and Hearing Research*, 39, S46-S57.

Yorkston, K.M., Strand, E.A., Kennedy, M.R.T. (1996). Comprehensibility of dysarthric speech: Implications for assessment and treatment planning. *American Journal of Speech-Language Pathology*, 5, 55-66.

Course Description

This course focuses on the advanced study of structural and neurogenic speech disorders, starting with an understanding of models of motor control of speech production, neurological representation of speech, and the effects of structural or neurological damage on articulation, resonance, phonation, respiration, and prosody. Students will learn to identify the specific speech deficits which characterize individuals with dysarthria, apraxia of speech, craniofacial anomalies and surgical or traumatic alterations in normal speech structure and function. Physical and clinical assessment and management of these cases will be emphasized.

Diversity, Equity & Inclusion:

At CSUN, we are fortunate to belong to a campus community that is diverse. We value equity and inclusion, must treat every individual with respect. We are diverse in many ways, and this diversity is fundamental to building and maintaining an equitable and inclusive classroom environment. Diversity can refer to multiple ways that we identify ourselves, including but not limited to race, color, national origin, language, sex, disability, age, sexual orientation, gender identity, religion, creed, ancestry, belief, veteran status, or genetic information. Each of these diverse identities, along with many others not mentioned here, shape the perspectives of the students and instructor in this class. Each of us is responsible for creating a safer, more inclusive classroom environment- both in person and virtual. I ask that you engage in discussions with care and empathy.

Course Requirements

Quizzes (25%)

Three quizzes about MSDs (Quizzes 1-3 worth 5%; Quiz 3 10%) and One quiz (10%) about Cleft-Palate will be administered. A makeup quiz is not possible.

Exams (55%)

Two exams will be administered. Exam 1 is worth 30% and Exam 2 is worth 25% of the final grade.

In-class Discussions (10%)

- **Questions will be posted in the Discussion Board in the designated weeks** *(see Tentative Schedule below)*
  - Each student will complete assignments by posting responses in the Discussion Board.
  - More details TBA

Supplement Activity (10%)

Students are expected to participate in two class activities:
[Activity 1] Knowledge of nervous pathway: Points will be given based on accuracy of the work; maximum point of **5** counted toward Exam 1.
[Activity 2] Standardized Protocols for MSD: Reviewing and demonstrating assessment tools for motor speech disorders. This activity is graded on a Pass/Fail basis, which is worth **5%** of the final grade.
[Activity 2] Clinical Competency Test: This activity is graded on a Pass/Fail basis, which is worth **5%** of the final grade. The dates of the activities are listed in the Tentative Course Schedule below.

EBP Case Study Report (10%)

A case study will be assigned. Provide a brief description of the disorder from a neural, physiological, or functional perspective, followed by at least two treatment methods and supporting data on their effectiveness and efficacy. Cite all references in APA format and include appendices if appropriate.
CTCPD 2b, 3c;

** Find detailed instructions in the Canvas, Assignment Page.*

Grading: A (90-100%), B (80-89%), C (70-79%), D (60-69%), F (below 60%)

Course Outline (Subject to revision)

WK	Date	Topics	Comments
WK1	1/26	**Overview of this course** **Introduction to motor speech disorders** **Review the motor speech system** **[WK1 In-class Discussion]** **CTCPD 2b, 3c ; CTCSLP 1a, 1b, 2a, 5a**	[Activity 1]
WK2	2/2	**Goals of Motor speech Evaluation** **Flaccid Dysarthria/Spastic Dysarthria** **[WK2 In-class Discussion]** **CTCSLP 3a, 4f**	Online Quiz 1
		Describing Dysarthria & Apraxia	
WK3	2/9	**Hypokinetic Dysarthria / Hyperkinetic Dysarthria** **[WK3 In-class Discussion]** Online Quiz 2	
WK4	2/16	**Ataxic Dysarthria / Unilateral UMN / Mixed Dysarthria** **[WK4 In-class Discussion]** Online Quiz 3	
WK5	2/23	**Quiz 4 [Neuro & Dysarthrias]**	
WK6	3/1	**Apraxia of Speech** **[WK6 In-class Discussion]**	
WK7	3/8	**Assessment of Motor Speech Disorders** Neurological/Motor speech exam Intelligibility exam. Data gathering, assessment with Diversity considerations; intervention strategies; and monitoring students' progress to identify changes in the rehabilitative program if necessary. **CTCPD 5b,5c ; CTCSLP 2c, 4a**	**[Activity 2]** **CTCSLP 4e**
WK8	*3/15*	**Exam 1** **Objective multiple choice and fill in the blank questions (Dysarthria): Physical & Neurological Structures and processes underlying Speech, Language and Swallowing Development and Dysarthria; & the role of Augmentative and Alternative devices in rehabilitation.** **CTCPD 2b, 3c, 5b, 5c ; CTCSLP 1a, 1b, 3a, 3b, 4f**	
	3/22	*Spring Recess, no class!*	
WK9	3/29	**Management of MSD 1 (Rehab)** **[WK9 In-class Discussion]**	
WK10	4/5	**Management of MSD 1 (cont'd)** In-class activity: Therapy (Activity #3): demonstrations of behavioral exercises for MSD and multifaceted intervention strategies. **CTCPD 6b**	

WK11	4/12	**Management of MSD 2 (Theory)** In-class activity: Therapy (Activity #3): demonstrations of behavioral exercises for MSD. **CTCPD 6c, 6c**	
WK12	4/19	**EBP Case Study report:** Choose a specific MSD. Describe the disorder briefly from a neural and physiological or functional point of view. Discuss ethics and then describe at least two treatment methods based on evidence based research and include data on effectiveness and efficacy. (1 page). **CTCPD 2b, 3c**	**See EBP report on page 2**
Overview of Craniofacial Anomalies and Management			
WK13	4/26	**Cleft palate I** **Cleft palate/Lips and treatments** Review anatomy, classifications developmental milestones and treatments that include transitional life experiences across the lifespan of the client, assessment and treatment of speech and language disorders among the Cleft Palate population and effective monitoring of clients progress. **CTCPD 7a ; CTCSLP 2a**	
WK14	5/3	**Cleft palate II** **Cleft palate/Lips and treatments** Review anatomy, classifications developmental milestones and treatments that include transitional life experiences across the lifespan of the client, assessment and treatment of speech and language disorders among the Cleft Palate population and effective monitoring of clients progress. **CTCSLP 3b, 5e**	
WK15	5/10	**Cleft palate III** **Cleft palate/Lips and treatments** Review anatomy, classifications developmental milestones and treatments that include transitional life experiences across the lifespan of the client, assessment and treatment of speech and language disorders among the Cleft Palate population and effective monitoring of clients progress. **Online Quiz** Objective multiple-choice questions (Cleft Palate): Anatomical and physiological structures and processes underlying speech, language, and swallowing development in individuals with cleft palate; and the role of surgical, prosthetic, and behavioral interventions in speech and resonance rehabilitation. **CTCSLP 1a, 1b, 3a, 3b, 4f**	
WK16	**5/17**	**Exam 2:** Essay questions dealing with a Case study, including prevention, diagnosis, compiling client data, employing least biased assessment tests and techniques, treatment plans, prognosis, & follow up issues such as collaboration and referral as outlined above. **CTCPD 5b,5c, 6c, 7a ; CTCSLP 2a, 2c, 3b, 4a, 4c, 5a, 5b, 5e**	

Course Objectives/ASHA Standards (KASA)

Student Learning Outcomes: By the conclusion of this course, student will:

1. …describe basic mechanisms for central and peripheral control of motor function relative to speech production.
2. ...discuss the embryology, etiology, incidence and genetics of craniofacial disorders, cleft lip and palate, and syndromes affecting the structural mechanism for speech production.
3. …describe the motor theory of speech production, and list speech production changes expected in older adults.
4. …interpret salient medical information in the history for a patient with structural or neurogenic speech deficits
5. …describe common medical disorders and conditions associated with neurogenic disorders of speech.
6. …identify the types of motor speech disorders, relate each type to site of neurological damage, and describe the neuromuscular conditions associated with each.
7. …describe speech characteristics of motor speech disorders and their effects on respiration, phonation, articulation, resonance, prosody and intelligibility.
8. …describe assessment techniques for motor speech disorders and the differential diagnosis of the dysarthrias and apraxia of speech.
9. …discuss treatment techniques for motor speech disorders, including behavioral, medical, and life participation approaches.
10. …describe structural and functional changes in the speech mechanism associated with craniofacial anomalies and genetic disorders, and the associated speech production disorders
11. …discuss physical and behavioral management of speech disorders in individuals with craniofacial anomalies or cleft lip/palate.
12. …describe common ablative surgical and medical treatments for head and neck cancer, and resulting speech disorders associated with such treatments.
13. …discuss assessment and management options for speech disorders in individuals with head and neck cancer and/or tracheostomy.

Knowledge and Skills Analysis (KASA)

This course contributes to acquisition of the following knowledge and skills, delineated by the American Speech-Language Hearing Association as required components of education and training in speech-language pathology.

For majors in speech-language pathology, this course contributes to:

- Standard III-B. Basic Communication Processes
  - Biological, Neurological, Developmental/Lifespan
- Standard III-C. Knowledge of the Nature of the Following Disorder Categories
  - Articulation - Etiologies, characteristics
  - Voice and Resonance, including respiration and phonation - Etiologies, characteristics
  - Communication Modalities - Etiologies, characteristics
- Standard III-D. Prevention, Assessment and Treatment of the Following Disorder Categories
  - Articulation - Assessment, Intervention
  - Voice and Resonance - Assessment, Intervention
  - Communication Modalities - Assessment, Intervention
- Standard III-E. Standards for Ethical Conduct

- Standard III-F. Research and Integration of Research Principles into Evidence-Based Clinical Practice

Class Policies

Professionalism

Please arrive on time. Cell phones must be turned off or placed on vibrate during class. If you have an emergency call you need to take, step out in the hall. NO TEXT MESSAGING IS PERMITTED DURING CLASS. Electronic devices must be turned off in class and during examinations. If a student is found to be texting or using the phone during class, the student will be asked to leave. Attendance in class is not counted toward a final grade; however, getting to class is central to getting the most out of the course. If you miss a class, you are responsible for getting notes from other students.

A Note About Artificial Intelligence (AI) Tools

Generative artificial intelligence tools—software that creates new text, images, computer code, audio, video, and other content—have become widely available. Well-known examples include ChatGPT, Google Gemini, and Microsoft Copilot/Bing for text and Adobe Express/Adobe Firefly, Dall-E, and Night Cafe for images. This policy governs all such tools, including those released during our semester together. A more complete statement of my AI policy will be provided in the first Zoom session, but my policy can be summarized as:

- You may use text-based tools to help improve your writing or to find references/resources, but you may not use these tools to generate text for your assignments. (If you do not understand the distinction, please reach out to me.)
- Use of AI tools to write your papers or other assignment submissions or failure to disclose use of AI tools in the context of your classwork, will be treated the same as any other kind of academic dishonesty (see A NOTE ABOUT APPROPRIATE ACADEMIC CONDUCT, in this syllabus).
- *If you use AI tools, you **must disclose** this in the assignment/submission, indicating what tool was used, what it was used for, and **your reflections** on the experience.

Please note: An AI-powered plagiarism detection tool is integrated into Canvas. It automatically reviews all report submissions and will notify both you and the instructor if any content is flagged for potential plagiarism. To avoid issues, ensure that all work submitted is your own and properly cited when necessary.

Accommodations for Special Needs & Academic Integrity

Special Needs

Students with a documented disability, including a learning disability, are eligible for accommodations through Disability Resources and Educational Services (DRES). Students are encouraged to request accommodations early on and to discuss their accommodations with me as soon as they are approved by Disability resources and Educational Services (DRES).

Academic Honesty

You are responsible for making yourself aware of and understanding the policies and procedures in the University Catalogs that pertain to Academic Honesty. Students should follow all policies concerning academic honesty as specified in their student code of conduct. Students should not copy activities that other students have done. In this course and all others, acts of cheating, plagiarism, misrepresentation, or other forms of dishonesty are not tolerated. Student academic dishonesty will result in penalties ranging from a failing grade on an assignment or examination, to a failing grade in the course, to referral to the Office of Student Affairs for determination of suspension or dismissal from the University, as described in the University Catalog, as well as online at
http://www.csun.edu/catalog/policies/academic-dishonesty/ (retrieved 08/01/2015)

CD 660 Structural Neurological Disorders
Linking Document

Introduced (I)
Practiced (P)
Assessed (A)

CTCPD

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Standard 3c page 3	3c page 3	
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Standard 7a page 4	7a page 4	

CTCSLP

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Standard 2c page 4	2c page 4
Standard 3a page 3	3a page 3, 4
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Standard 4a page 4	4a page 4
Standard 4c page 4	4c page 4
Standard 4e page 4	4e page 4
Standard 4f page 4	4f page 3, 4
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Standard 5b page 4	5b page 3, 4
Standard 5e page 4	5e page 3,4