

**SPLH 828 Speech Disorders in Special Populations**  
**Spring 2009**  
**(2credit hours)**

**Monday & Wednesday**  
**3:15 – 4:55PM**

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**Course Description**

This course focuses on select speech disorders associated primarily with structural anomalies of the speech mechanism. There are two broad areas of focus: 1) speech and communication associated with congenital anomalies of the velopharyngeal mechanism, hard palate, lips, teeth and dental arches, and 2) speech and communication of individuals with various types of head and neck cancer. For the latter, the majority of time will be spent on laryngeal cancer although cancers of the tongue, pharynx, palate, etc. will also be considered.

**Course Objectives and Learning Outcomes as Related to ASHA Knowledge Standards**

This course partially fulfills the requirements of ASHA Knowledge Standards II-B Normal Processes, III-C Communication Disorders, and III-D Clinical application in the area of Phonation and Resonance. This course is considered a secondary experience in terms of meeting the ASHA standard in the area of Phonation and Resonance which means that either another secondary experience or a primary experience is needed to completely fulfill the ASHA Knowledge Standard in this area.

The overall goal of this course is for students to have sufficient knowledge of the specific speech disorders addressed in this course for entry level professional practice (with appropriate CFY supervision) and/or advanced study in the area. By the end of this course, students should be able to demonstrate knowledge in the areas listed below with associated ASHA Knowledge Standards in the area of Phonation and Resonance referenced in bold italics:

Congenital Anomalies:

1. Normal and abnormal human embryology, particularly that related to the head, neck and face.  
*Understand basic concepts, terminology & theory*
2. Normal velopharyngeal anatomy and physiology for speech.  
*Understand basic concepts, terminology & theory*
3. The diagnostic process (model and tools) for identifying speech deficits associated with velar abnormalities, including the requisite observation, problem solving, and critical thinking skills needed to choose and complete these evaluation procedures.  
*Develop an assessment plan;*  
*Analyze and integrate assessment findings;*  
*Determine presence of disorder and related factors*
4. Language, hearing, feeding, psychosocial and dental/orthodontic issues of individuals with cleft lip &/or palate and other craniofacial anomalies. Describing deficits in these areas, evaluating interrelationships

among behaviors/altered abilities in these areas, particularly as they relate to speech sound production will be emphasized.

***Understand basic concepts, terminology & theory;***

***Develop an assessment plan;***

***Analyze and integrate assessment findings;***

***Determine presence of disorder and related factors***

5. Surgical, medical, prosthetic, and behavioral treatment of speech, language, and hearing problems of individuals with clefts/craniofacial anomalies. Again, this includes demonstration of the observation, problem solving, and critical thinking skills needed to select the appropriate therapy(ies), and execute the behavioral strategies; counseling patients and their families regarding communication disorders associated with cranio-facial anomalies. The impact on speech from treatments for the common dental, orthognathic, and nasal deformities in individuals with craniofacial anomalies will be considered.

***Analyze and integrate assessment findings;***

***Determine presence of disorder and related factors;***

***Develop a treatment plan based on available evidence***

#### Head/Neck Cancer

1. Laryngeal cancer diagnosis, medical/surgical treatments, and the effects of these treatments on speech production.

***Understand basic concepts, terminology & theory;***

***Develop an assessment plan***

2. Speech rehabilitation following total laryngectomy: esophageal speech, tracheoesophageal speech, and artificial larynx speech . This includes a basic understanding of the process by which each of these methods of speech are accomplished, features of the speech, assessment of an individual's candidacy for a given communication option, training principles, and typical problems/difficulties.

***Understand basic concepts, terminology & theory;***

***Develop an assessment plan;***

***Analyze and integrate assessment plan;***

***Determine presence of disorder and related factors***

3. Effects of other surgical resections/treatments on speech production. This will include surgeries on the larynx (near total laryngectomy, etc.), pharynx, velopharynx, and tongue.

***Understand basic concepts, terminology & theory;***

***Develop an assessment plan;***

***Analyze and integrate assessment plan;***

***Determine presence of disorder and related factors***

4. Speech rehabilitation principles and process for management of patients undergoing surgical resections of the larynx (including total laryngectomy), pharynx, velopharynx, and tongue.

***Develop a treatment plan based on available evidence***

The following activities will be used to enable students to demonstrate knowledge and understanding in the above mentioned areas: classroom lectures, demonstrations, and discussions; assigned readings; homework

assignments; and written examinations (short answer, essay, multiple choice, and true/false questions) requiring integration of information, problem solving, and critical thinking abilities with a focus on application of the information within a clinical context.

### **Readings**

There is not a required textbook for this course. The primary content will be covered in class lectures and demonstrations. I have placed a set of required readings on reserve on each campus. There are a number of good websites available that can serve as a supplement to what we cover. I will be giving these out to you as we go along.

### **Format of Classes**

We'll be mixing up the classroom activities a bit for fun so that neither of us snoozes. In each class meeting there will typically be some straight lecturing to help cover basic content, but I really do try to get you guys involved in this. You should expect to be asked direct questions (either thrown out to the group or to you specifically) or to offer your thoughts and impressions. I like to ask questions of you or solicit questions from you throughout the lectures. Please feel free to stop me at any point to ask questions or to ask for a repeat of something – I'd rather you not be confused in class. I am pretty informal in class, so just pipe up or raise your hand. I don't mind backtracking (the review is usually good for everybody). We will also be doing some in class exercises together – looking at endoscopy images, listening to audio samples and making judgments of voice and other fun stuff. We might also do some in-class readings and other exercises as time allows. And you can call me Jeff.

I like to work off of outlines in class. I will post these on Blackboard ahead of each class so that you can print it out to have with you for each lecture if you'd like. I will do the same with any PowerPoint presentations that I use, although I don't use them throughout the whole course. We also will likely have a few guest lecturers to cover specific topics. I'll keep you posted on that.

### **Grading:**

Course grades are based on the following activities (more details below):

	<u>Points</u>	<u>Percent of grade</u>
1. Tests: Midterm exam (VP stuff)	80	30%
Final exam (cancer stuff)	80	30%
2. Written project	35	14%
3. Homework assignments (3 @ 10 each)	30	11%
4. Journal Writing (2 entries)	15	6%
5. Class participation	<u>25</u>	<u>9%</u>
	265	100%

Tests. The tests will be take-homes. I'll give you the test and a specific due date as the time arrives (you'll have somewhere between 1-7 days to do it – I'll let you know specifically when I hand out the tests). There is a one full grade penalty for turning a test in late. It may seem stiff, but I've been burned before and it is not fair to the other students if one of you has extra time. The midterm will happen somewhere near the middle of the course (hence the name "midterm" – I am a master of the obvious). Once I see how we are progressing I will give you specific dates for handing it out and returning it. It will be a mix of short answer, multiple

choice, etc. that deals with material we've covered to that point. The final test will focus on info from the second half of the course. I'll focus you more re: content as the time approaches.

### Written Project

Information on the written project will follow. Basically, I will offer a list of potential topics/questions (or you can come up with one of your own as long as you talk it over with me first) from which you chose one. A short, but thorough, write-up of the topic will be required (literature review, critique, summary/conclusion, yada, yada), possibly with a brief presentation to the rest of the class about what you researched if class time allows.

### Homework Assignments

Homework assignments will be handed out in class as the time arises. These will be a combination of short answer, multiple choice, labeling figures, etc. and will most likely be used as one way to help you learn the anatomy/physiology/genetics (i.e., I expect I'll have you do at least two of these before the midterm, if not all three). The homework assignments are not group projects; please complete them on your own.

### Journal Writing

I'll give you a topic that will require some reflection related to topics we're talking about in class. Your task will be to write up your reflection. I will be reading these in something of a random fashion. That is, you have to write a response for each topic and email it to me. I will read the responses quasi-randomly so that I read a decent sampling of each student's responses throughout the semester. I also may be distributing your reflections to your classmates so that we can all learn from each other. I may ask you to read a classmate's response and provide a response to what they've written (all done without names attached so no-one needs to worry about what other people might think of what you wrote). We'll be using the on-line journaling through Blackboard to do these entries.

### Class Participation

There will be some in-class activities (individual and group deals are likely). If you miss class on one of the days that we do an in-class activity, you cannot make-up the activity to get the points. The other portion of the points in this category are truly for your general in-class participation. The in-class activities will provide opportunities for you to jump into discussion with your mates and me. And during the lectures, I will be paying attention to your participation as well. To get the full portion of these points you need to participate. I will be keeping track after each lecture (0=absent, disruptive, clearly not attentive; 1=present and attentive, not disruptive, few [if any] active attempts at participation; 2=contributing actively to the class). You'll have many opportunities and I'm not very mean, so the points are there for the taking if you jump in

Grading will be based on your overall point total as follows:

	<u>Points</u>	<u>Percent</u>
A	≥251	>95%
A-	238 – 250	90% to 94.9%
B+	230 – 237	87% to 89.9%
B	219 – 229	83% to 86.9%
B-	212 – 218	80% to 82.9%
C+	204 – 211	77% to 79.9%
C	193 – 203	73% to 76.9%

C-	185 – 192	70% to 72.9%
D+	177 – 184	67% to 69.9%
D	166 – 176	63% to 66.9%
D-	159 – 165	60% to 62.9%
F =	≤158	≤59%

**Other Activities – Non-graded but good things to do that would add to your class experience**

1. KUMC Cleft Palate Clinic: 1<sup>st</sup> Friday of the month. Meets on the KUMC main campus. Usually starts at 8:30 and finishes up at about 1PM (give or take an hour). You can observe all or part of a clinic. Need to contact me ahead of time to make sure the clinic is still on and that there is room for you to observe.
2. Nu-Voice Club meetings: 1<sup>st</sup> Saturday of the month. Meetings are at 10:30pm. This is a local support group for individuals with a laryngectomy (and their significant others).

**Statement of Disability**

If you need accommodations to meet the requirements of this course because of a disability/condition, please notify the instructor or the Equal Opportunity/Disability Specialist (913-588-7813; TDD 913-588-7963). Counseling and educational support are available without cost and with full confidentiality through the Student Center (913-588-6580).

## Course Outline

<u>DATE</u>	<u>TOPIC</u>	<u>READINGS</u>
1/21	<b>Course Intro</b> <b>Embryology &amp; fetal development</b> A. Overview B. Head/neck/face specifically	- Moore, Chpt 1 - Moore, Chpt 10
1/26	<b>Causes of congenital malformations</b> <b>Velopharyngeal function &amp; dysfunction</b> A. Anatomy & physiology – normal/disordered B. Impact of dysfunction on speech production	- Moore, Chpt 8; -Bzoch (Ed), Chpt 2 (Moon & Kuehn) - Bzoch (Ed), Chpt 10 (Bradley)
1/28 & 2/2	<b>Evaluation</b> A. Diagnostic model B. velopharyngeal function 1. Perceptual & 2. Instrumental	- McWilliams, et al, Chpt.19 - Moller & Starr (Ed), Chpt 9 (Moon)
2/4 & 2/9	<b>Treatment</b> A. Surgical 1. primary closures 2. secondary procedures 3. Medical/prosthetic B. Behavioral	- Bzoch (Ed), Chpt 5 (Seagle) - Bzoch (Ed), Chpt. 6 (Riski) - Bzoch (Ed), Chpt 7 (Rosen & Bzoch) - Moller & Starr (Ed), Chpt. 11 (Starr)
2/11	<b>Other Symptoms/Problems</b> <b>Associated Syndromes/sequences</b>	- Peterson-Falzone, et al., Chpt. 2
2/16	<b>Other Congenital Anomalies of the face, teeth etc. that are not velar in nature</b>	- Bernthal & Bankson, Chpt. 5 - Travis (Ed) , Chpt28 (Bloomer)
2/18	<b>Oral Cancer (lingual, palatal, etc.)</b>	-Casper & Colton, Chpt. 8
2/23	<b>Laryngectomy</b> A. Overview B. Surgical overview and effects on speech	-Salmon (Ed), Chpt. 11 (Shanks)
2/25 & 3/2	<b>3 Primary Alaryngeal Speech Options</b> <b>Esophageal Speech</b> <b>Tracheo-esophageal Speech</b> <b>Artificial Larynx Speech</b>	-Salmon (Ed), Chpt. 7 (Dugay) -Doyle & Keith (Ed), Chpt. 17 (Gress & Singer) -Salmon (Ed), Chpt. 4 (Salmon)
3/4	<b>Comparison: ES vs. TE vs AL</b>	



## BIBLIOGRAPHIC REFERENCES

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- Doyle, P.C. & Keith, R.L. (Eds.) (2005). *Contemporary considerations in the treatment and rehabilitation of head and neck cancer: Voice, speech, and swallow*. Austin, TX: PRO-ED.
- McWilliams, B.J., Morris, H. & Shelton, R. (1990). *Cleft palate speech* (2<sup>nd</sup> ed.). Philadelphia, PA: B.C. Decker, Inc.
- Moller, K. & Starr, C. (Eds.) (1993). *Cleft palate: Interdisciplinary issues and treatment*. Austin, TX: PRO-ED
- Moore, K.L. (1988). *The developing human: Clinically oriented embryology*. Philadelphia, PA: W.B. Saunders Co.
- Peterson-Falzone, S.J., Hardin-Jones, M.A. & Karnell, M.P. (2001). *Cleft palate speech* (3<sup>rd</sup> ed.). St. Louis, MO: Mosby.
- Salmon, S.J. (Ed.) (1999). *Alaryngeal speech rehabilitation* (2<sup>nd</sup> ed.). Austin, TX: PRO-ED.
- Travis, L.E. (Ed.) (1971). *Handbook of speech pathology and audiology*. Englewood Cliffs, NJ: Prentice-Hall, Inc.