

**SPLH 828 Speech Disorders in Special Populations**  
**Spring 2012**  
**(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 [about 2/3 to 3/4 of the course], and 2) speech and communication of individuals with various types of head and neck cancer [about 1/3 to 1/4 of the course]. For the head and neck cancer, 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 chose 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**

The textbook for this course is:

Kummer, A.W. 2008. *Cleft Palate and Craniofacial Anomalies: Effects on Speech and Resonance*. Clifton Park, NJ: Delmar Cengage Learning.

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.

There is not a specific textbook for the head & neck cancer portion of this class.

### **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. 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)	90	35% <b>(NOT FOR PORTFOLIO USE)</b>
Final exam (VP+cancer stuff)	70	27% <b>(NOT FOR PORTFOLIO USE)</b>
2. Assignments (4 @ various points)	<u>100</u>	<u>38%</u> <b>(ANY OF THESE CAN BE USE IN YOUR PORTFOLIO)</b>
	260	100%

Tests. The tests will either be take-homes or possibly Blackboard tests that you have to do at home within a given time frame. Keep in mind that these two test are very likely to happen within a short time from one another because the first is not given until all or nearly all of the cleft/cranio material is covered. 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. Also, while the test is a take home or Bboard test, you will have only a 1 or 2 days to get it done. In order for you to be able to complete the test in the allotted time, my guess is you will have to study for the test prior to my handing it out. Once I see how we are progressing I will give you specific dates for handing out and returning tests. They 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.

### **Homework Assignments**

If you look at the breakdown of course points as a percent of the total, you'll see that these 4 assignments are the equivalent of more than one test. I hope you approach them with that in mind. This is a way to seriously help (or possibly hurt) your grade in the course.

The homework assignments are not group projects; please complete them on your own unless I indicate otherwise on a given assignment. There is a 10% point deduction for each day that an assignment is late. Here are all of your assignments with due dates. No excuses – you’ve got it all in front of you so you can plan out your workload for the class.

1. **Facial/Body Anthropometrics and Clinical Observations.** – see posted description and worksheet for details.  
**DUE DATE: Feb. 6 at the end of class** (late penalty kicks in at 5:01 pm on the due date).  
**POINTS: 25**
  
2. **Facial Attractiveness and Communication** – this is a journal entry type assignment.  
**DUE DATE: Feb. 15<sup>th</sup> at the end of class** (late penalty kicks in at 5:01 pm on the due date).  
**POINTS: 20**
  
3. **Facial Differences: Educating Others** – this task is meant to result in at least the beginnings of a product that you might be able to use once you are working. I want you to put together a proposal describing how you would educate a targeted group of people regarding facial differences. Clinically we deal with teachers, health care providers, bosses, classmates/peers, etc. who may not deal well with people with a facial difference (and the impacts can be significant in terms of schooling, job, social life, bullying, making friends, etc.). I want you to plan a program to educate people about facial differences. See the posted description for details.  
**DUE DATE: Feb 27<sup>th</sup> at 5pm** (late penalty kicks in at 5:01 pm on the due date).  
**POINTS: 30**
  
4. **Dental Impression Evaluation** – this is your chance to learn about the dental arch and occlusion. See the posted description. The intent is for this to be self-study of a topic that we will only briefly get to talk about in class given time constraints. I am posting several readings to help you out along the way. You also are receiving one dental casting today so that you can start ASAP. Once done, turn in the dental casting and you’ll get a second one (the homework consists of completing evaluations of two dental castings).  
**DUE DATE: March 7<sup>th</sup> at 5pm** (usual, late penalty kicks in at 5:01pm this date)  
**POINTS: 25**

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

	<u>Points</u>	<u>Percent</u>
A	≥247	>95%
A-	234 – 246	90% to 94.9%
B+	226 – 233	87% to 89.9%
B	216 – 225	83% to 86.9%
B-	208 – 215	80% to 82.9%
C+	200 – 207	77% to 79.9%
C	190 – 199	73% to 76.9%
C-	182 – 189	70% to 72.9%
D+	174 – 181	67% to 69.9%
D	164 – 173	63% to 66.9%
D-	156 – 163	60% to 62.9%
F =	<156	≤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. Might have a second clinic on the 3<sup>rd</sup> Friday of the month as well.
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>
1/18 & 1/23 (partial)	<b>Course Intro</b> <b>Embryology &amp; fetal development</b> A. Overview B. Head/neck/face specifically	- Moore, Chpt 1 - Moore, Chpt 10
1/25	<b>Causes of congenital malformations</b>	- Moore, Chpt 8; -Kummer, Chpt 3 and 4
1/30	<b>Velopharyngeal function &amp; dysfunction</b> A. Anatomy & physiology – normal/disordered B. Impact of dysfunction on speech production	-Kummer, Chpt 1 and 2 - Bzoch (Ed), Chpt 10 (Bradley)
2/1 & 2/6	<b>Evaluation</b> A. Diagnostic model B. velopharyngeal function 1. Perceptual & 2. Instrumental	- Kummer, Chpts.11, 12, 13, 14, 15, 16, 17
2/8, 2/13, 2/15	<b>Treatment</b> A. Surgical 1. primary closures 2. secondary procedures 3. Medical/prosthetic B. Behavioral	- Kummer, Chpt18 and 19 - Kummer, Chpt 20 - Kummer, Chpt. 21
2/20	<b>Other Symptoms/Problems</b> <b>Associated Syndromes/sequences</b>	- Peterson-Falzone, et al., Chpt. 2
2/22	<b>Other Congenital Anomalies of the face, teeth etc. that are not velar in nature</b>	- Bernthal & Bankson, Chpt. 5 - Travis (Ed) , Chpt28 (Bloomer)
2/27	<b>Oral Cancer (lingual, palatal, etc.)</b>	-Casper & Colton, Chpt. 8
2/29	<b>Laryngectomy</b> A. Overview B. Surgical overview and effects on speech	-Salmon (Ed), Chpt. 11 (Shanks)
3/5 & 3/7	<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)

## BIBLIOGRAPHIC REFERENCES

- Bernthal, J.E. & Bankson, N.W. (1998). *Articulation and phonological disorders* (4<sup>th</sup> ed.). Boston, MA: Allyn & Bacon.
- Bzoch, K. (Ed.) (1997). *Communicative disorders related to cleft lip and palate* (4<sup>th</sup> ed.). Austin, TX: PRO-ED.
- Casper, T.K. & Colton, R.H. (1998). *Clinical manual for laryngectomy and head/neck cancer rehabilitation* (2<sup>nd</sup> ed.). San Diego, CA: Singular Publishing Group, Inc.
- 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.