

## Sample Syllabus for Phonetics of Speech

### **Course Syllabus** **Speech-Language-Hearing 121** **SPLH: The Phonetics of Speech** Spring 2016

Tuesdays and Thursdays: 9:00-10:30 AM, Room: Dole 2092

#### **Instructor Information**

Instructor: Breanna Krueger

E-mail: [bkrueger@ku.edu](mailto:bkrueger@ku.edu)

Office: 3086 Dole

Office Hours: Mondays 1:00pm-3:00 PM or by appointment

**Course pre-requisites:** MATH 101 or equivalent

#### **Course Description:**

Have you ever wondered how we learn the sounds of our native language, why dialects and accents exist, or why children produce speech sound errors like "wabbit"? This course offers an explanation of the articulatory and perceptual systems of speech intended for non-science majors. The emphasis of this course will be in the articulation and perception of typical and disordered speech as it relates to speech-language pathology and audiology. Topics include: simple physics of sound, anatomy of the ear and oral tract, articulation of language sounds, and perception of language. The class meets 3 hours per week.

#### **Learning Objectives and Outcomes:**

At the end of this course, the student will be able to:

- Understand elements of the physics of sound including sound generation and source/filter theory.
- Describe the anatomy and function of the ear and oral tract as it relates to spoken language.
- Transcribe the sounds of English using the International Phonetic Association conventions, and categorize consonants and vowels according to their phonological features.
- Identify elements of vowels and consonants on spectrograms and waveforms.

#### **Required Textbooks and Materials**

Mullin, W.J., Gerace, W.J., Mestre, J.P., and Velleman, S.L. (2003). Fundamentals of Sound with Applications to speech and hearing. Boston: Allyn & Bacon.

Supplemental Readings will be available via BlackBoard as noted in the schedule below.

## Grading Policy

The grading policy is governed by the University. The University Senate Rules (Section 2) define grades as such:

The letters A, B, C, D, and + shall be used to indicate passing work:

1. The grade of A will be reported for achievement of outstanding quality.
2. The grade of B will be reported for achievement of high quality.
3. The grade of C will be reported for achievement of acceptable quality.
4. The grade of D will be reported for achievement that is minimally passing, but at less than acceptable quality.
5. The grade of F will be reported to indicate that the quality of work was such that, to obtain credit, the student must repeat the regular work of the course

The final grade for the course will be based on the following percentages:

A(94-100%)

A-(90-93%)

B+ (87-89%)

B(84-86%)

B-(80-83%)

C+(77-79%)

C(74-76%)

C-(70-73%)

D+(67-69%)

D(64-66%)

D-(60-63%)

F(<60%)

### Assignments:

In class labs 20%

Homework 30%

Midterm 25%

Comprehensive Final 25%

**Preparation:** Students are expected to complete course readings prior to the class period in which they are assigned. This may include reading chapters from the text, and additional

readings. Students may find it helpful to take notes on the readings and to jot down any questions they have so they can be discussed in class. The University of Kansas Academic Achievement and Access Center advises studying for 2 hours for every hour you spend in class. For this course, that means you should expect to spend up to 6 hours studying outside of class on your own time each week. Further time management skills can be accessed here: <https://achievement.ku.edu/time-management-now> Please use my office hours to get further help outside of class.

**In-class labs (5 total):** A total of 5 in-class labs will be conducted throughout the course session. These will be based on what has been discussed during class time. Therefore, it is important to ensure that students have completed the course readings and attend class consistently to prepare for these labs. **These labs will not be made up without acceptable written documentation.** If you miss a quiz, you will miss 4% of your overall final grade for that quiz. If you must be absent, and know in advance, please contact me as soon as possible to determine whether your absence is excused and to discuss possible resolutions.

**Homework (3 total):** A total of 3 Homework assignments are assigned for completion outside of class time. These assignments include assignments on the topics of sound frequency, IPA transcription, and a spectrogram reading. **Late work will not be accepted.** Requirements of these assignments will be provided on Blackboard, and discussed in class. The general guidelines for the assignments are as follows:

**Sound Frequency (Due 2/2):** Compute the frequency, amplitude and wavelength of given sound waves.

**IPA Transcription (Due 2/23):** You will be assigned two sound files for transcription. The assigned files for you can be found on BlackBoard. Transcribe the two samples, and provide a 1 paragraph description of the misarticulation patterns of the child sound file and compare with the normative data found in (Smit, Hand, Freilinger, Bernthal, & Bird, 1990)

**Spectrogram Reading (Due 4/12):** You will be provided with sound files that you will open in Praat. You will be asked to identify the duration of the words, the frequency of the formants in the vowels, and the voice-onset time of the word-initial stop consonants.

**Midterm and Final Exams:** The midterm and final exams will include a) multiple-choice questions b) short-answer questions c) true or false questions and d) fill-in-the-blank on diagrams and spectrograms. Questions will include material from class lecture and required readings. Each exam is worth 25% of your final grade. **There will be no make-up exams without acceptable documentation.** If you miss the exam, you will be assigned a 0 for the exam.

**Blackboard**

BlackBoard will be used to disseminate course lecture slides, supplemental readings and for keeping grades. BlackBoard can be accessed at <http://courseware.ku.edu>. If you cannot access BlackBoard by the first day of class, please contact me as soon as possible. Course lectures will be posted to BlackBoard by 5pm after the lecture has been given. This provides the student an opportunity to return to the days' lectures.

### **Class Policies**

**Computers** may be used for notetaking purposes during class. Students who are doing other activities on their computer or online (e.g. checking email, writing other homework) will be asked to not bring their computer again.

**Cell phones** must be on silent, and stowed in a pocket or bag during class.

### **Students with Disabilities**

The Academic Achievement and Access Center (AAAC) coordinates academic accommodations and services for all eligible KU students with disabilities. If you have a disability for which you would like to requires accommodations, please contact the AAAC located in 22 Strong Hall (785-864-4064). You can get further information at <http://www.accessku.edu>. Please contact me privately to discuss your needs in this course.

### **Attendance Policy**

Attendance at all classes is required. This ensures that students obtain all information from course lectures and receive adequate opportunity to ask questions as they arise. Furthermore, in-class labs are conducted throughout the course, and there are no make-up labs allowed.

### **Academic Misconduct**

Students are expected to comply with University guidelines with respect to academic misconduct as described in the University Senate Rules and Regulations (2.6.1)

“Academic misconduct by a student shall include, but not be limited to, disruption of classes; threatening an instructor or fellow student in an academic setting; giving or receiving of unauthorized aid on examinations or in the preparation of notebooks, themes, reports or other assignments; knowingly misrepresenting the source of any academic work; unauthorized changing of grades; unauthorized use of University approvals or forging of signatures; falsification of research results; plagiarizing of another's work; violation of regulations or ethical codes for the treatment of human and animal subjects; or otherwise acting dishonestly in research.”

### **Schedule**

<b>Date</b>	<b>Topic</b>	<b>Supplemental Readings</b>	<b>Assignment</b>
<b>T 1/19</b>	Course Introduction		

Th1/21	Introduction to Sound Waves		
T 1/26 Th1/28	Intensity, Loudness and Sound Pressure Sound propagation		
T 2/2 Th2/4	Anatomy of the Ear (part 1) Function of the Ear (part 2)		<b>Homework 1 Due</b>
T 2/9 Th2/11	Anatomy of the Articulators Function of the Articulators		
T 2/16 Th2/18	Anatomy and Function of Child Speech Source/Filter Theory: The Larynx		
T 2/23 Th2/25	Speech production (Part 1) Speech production (Part 2)		<b>Homework 2 Due</b>
T 3/1 Th3/3	Measurement of Speech Production Praatworkshop (in lab 3084)	(Hood, Berlin, & Parkins, 1991)	
T 3/8 Th3/10	<b>Midterm Exam Review</b> <b>Midterm Exam</b>		<b>Midterm Exam</b>
T 3/15 Th3/17	<b>SPRING BREAK</b> <b>NO CLASS</b>		
T 3/22 Th3/24	Exam review Articulation of Vowels: Features		
T 3/29 Th3/31	Articulation of Consonants: Features Introduction to IPA and transcription		
T 4/5 Th4/7	Transcription of Speech Typical sound acquisition	(Wells, 2001) (Smit et al., 1990)	
T 4/12 Th4/14	Acoustics of Vowels Acoustics of Vowels	(Peterson & Barney, 1952)	<b>Homework 3 Due</b>
T 4/19 Th4/21	Acoustics of Consonants Acoustics of Consonants	(Blumstein & Stevens, 1979)	
T 4/26 Th4/28	Perception of speech (part 1)		

	Perception of speech (part 2)		
<b>T 5/3</b> <b>Th5/5</b>	Psycholinguistic phenomena Final Exam Review	(McGurk & MacDonald, 1976)	
<b>Friday 5/15 7:30- 10:00am</b>	<b>Final Exam</b>		<b>Final Exam</b>

**Supplemental Readings**

Blumstein, S. E., & Stevens, K. N. (1979). Acoustic invariance in speech production: Evidence from measurements of the spectral characteristics of stop consonants. *The Journal of the Acoustical Society of America*, 66(4), 1001-1017.

Hood, L., Berlin, C., & Parkins, C. (1991). Measurement of sound. *Otolaryngologic Clinics of North America*, 24(2), 233-251.

McGurk, H., & MacDonald, J. (1976). Hearing lips and seeing voices.

Peterson, G. E., & Barney, H. L. (1952). Control methods used in a study of the vowels. *The Journal of the Acoustical Society of America*, 24(2), 175-184.

Smit, A. B., Hand, L., Freilinger, J. J., Bernthal, J. E., & Bird, A. (1990). The Iowa articulation norms project and its Nebraska replication. *Journal of Speech and Hearing Disorders*, 55(4), 779.

Wells, J. C. (2001). IPA transcription systems for English. *PG Bulletin: Bulletin of teachers of English phonetics in Chile and abroad*, 9.