

SYLLABUS
FALL 2014
SPPA 3140 – SPEECH SCIENCE
9:30-10:45 Tuesday & Thursday: Cramer 038

Instructor: Dr. Jeff Berry

Office: Cramer Hall Room 230L or 230U (Lab)

Office Hours: T & R: 10:45 – 12:00 & 3:30-4:30

Others by Appointment

Phone: 288-1406

Purpose

Understanding the processes involved in normal speech production and perception is a critical preliminary to clinical service provision in speech-language pathology. The purpose of this course is to provide basic scientific information necessary for understanding speech acoustics and the physiological and theoretical bases of speech production and perception.

Required Text:

Hixon, T.J., Weismer, G., and Hoit, J.D. (2014). *Preclinical Speech Science: Anatomy, Physiology, Acoustics, Perception (second edition)*. San Diego: Plural Publishing.

Requirements:

Three examinations will be given during the semester. The dates for the exams are listed below. Exams will cover material presented in lectures as well as assigned readings. All exams will be of mixed format (i.e., T/F, Multiple Choice, Fill in the Blank, Matching, and Essay). The third exam will be held during the final exam period and focus on material presented/read since the second examination (the last “third” of the course). In addition, a 20 question multiple-choice (“final exam”) will also be taken during this last exam period and will focus on material presented/read throughout the course.

Exam 1: Tuesday, Sep. 30th (9:30-10:45)

Exam 2: Tuesday, Nov. 4th (9:30-10:45)

Exam 3: Wednesday, Dec. 10th (10:30-12:30)

In addition to the three examinations, students will be required to contribute to a group research project. You will be assigned membership of a study team. Your team will be assigned a research topic. As a group you will produce a “progress

report” and a “final report” that include both individual and group contributions. A detailed description of this project will be provided when groups are assigned.

The completed project is worth a maximum of 100 points. 50 possible points will be related to the group (40 for group writing; 10 for group effort as judged by me based on “progress reports”). 50 possible points will be related to individual performance (40 for individual writing; 10 for individual effort as judged by your team members). The “progress report” will be due by **October 23rd**. The “final report” will be due by **November 25th**. The completed work will count for a maximum of 100 points.

Grading Procedure:

Examinations (3)	100 Points Each
Final Exam	100 Points
Project	100 Points
TOTAL	500 Points

Failure to take any examination will result in 0 points.

Make-up examinations will not be offered without an official excuse.

Final grade will be based upon the total number of points accumulated out of total possible points, as well as overall class performance.

Grading Scale:

93 and Above	= A
88-92	= AB
83-87	= B
78-82	= BC
73-77	= C
68-72	= CD
63-67	= D
62 and Below	= F

Attendance:

Attendance is expected at all class meetings. Three unexcused absences may be cause for being dropped from the course. Make-up examinations will not be offered without an acceptable excuse.

Acceptable anticipated absences:

- The student is away from campus representing an official university function, e.g., participating in a professional meeting, as part of a judging team, or athletic team.
- Required court attendance as certified by the Clerk of Court.
- Religious observances when certified by a letter from the student's parent(s) or religious leader.
- Required military duty as certified by the student's commanding officer.

Acceptable emergency absences:

- Illness or injury when certified by an attending physician, dentist, or nurse. The certification should show the date service was provided to the student but should not describe the nature of that service.
- Death or serious illness in the immediate family (parents, step-parents, siblings, spouse, children, step-children, foster children, in-laws, sibling in-laws, grandparents, great grandparents, step-great grandparents, grandchildren, aunts, uncles, nieces, and nephews) when certified by a letter from the student's parent(s) or spouse.

ASHA Certification Standards:

Satisfactory completion of this course is intended to assist students in meeting the following knowledge and skills required for the American Speech-Language-Hearing Association (ASHA) Standards for the Certificate of Clinical Competence in Speech-Language Pathology:

- Standard III-A: The applicant must demonstrate knowledge of the principles of biological sciences, physical sciences, mathematics, and the social/behavioral sciences.
- Standard III-B: The applicant must demonstrate knowledge of basic human communication and swallowing processes, including their biological, neurological, acoustic, psychological, developmental, and linguistic and cultural bases.
- Standard III-F: The applicant must demonstrate knowledge of processes used in research and the integration of research principles into evidence-based clinical practice.

WI-DPI Standards:

Satisfactory completion of this course is intended to assist students in meeting the following requirements for WI-DPI Licensure in Speech-Language Pathology:

- Standards 1, 6, and 10.

Outcome Objectives:

At the end of this course, students should be able to:

1. Explain the tenants and physiological/anatomical underpinnings of speech acoustics.
2. Describe equipment and procedures used in making physiological and acoustic measurements of the process of speech production.
3. Describe basic theoretical models of speech production and speech perception.
4. Demonstrate a rudimentary knowledge of how acoustic and physiological data may reflect speech pathology.

Course Outline:

Topic	
	<i>Hixon et al. (2nd Edition)</i>
<i>Introduction & Orientation</i>	Chapter 1
<i>Acoustics</i>	Chapter 7
<i>Vowel Acoustics 1</i>	Chapter 8 (pp. 415-435)

EXAM 1

<i>Vowel Acoustics 2</i>	Chapter 8 (pp. 435-454)
<i>Consonant Acoustics</i>	Chapter 9
<i>Acoustic Analysis</i>	Chapter 10

EXAM 2

<i>Acoustic Phonetics</i>	Chapter 11
<i>Sensorimotor Control</i>	Chapter 6 (pp. 369-374) Guenther (2006) Perkell (2012)
<i>Speech Perception</i>	Chapter 12

EXAM3/FINAL