

Speech Science
CSDI 328:01
Spring 2007

Instructor:

Richard A. McGuire, Ph.D., CCC-SLP
McGannon 17
977-2825
mcguirra@slu.edu

Office Hours:

I have an open door policy. If you wish to meet with me at a specific day/time, I encourage you to make an appointment.

Students with disabilities and/or other special needs are encouraged to contact me privately if there are services and/or adaptations that can be made to maximize your learning of course content.

Attendance & Course Meeting Times:

This is a three credit course that meets from 8:00 until 9:15 a.m. on Tuesdays and Thursdays. **You are expected to attend every class and to arrive on time.** I will take attendance as the “first order of business” during each class session and attendance will be a factor in your course grade. My intent for this approach to attendance is related specifically to the 8:00 a.m. start. I impose this policy to reduce the likelihood of habitual tardiness and absences. I realize that there can be legitimate reasons for being late or absent (e.g., traffic or illness) and will not consider negatively an occasional late arrival or absence in the context of your course grade. This policy will negatively impact the habitual offender.

Academic Honesty:

"Students are expected to be honest in their academic work. The University reserves the right to penalize any student whose academic conduct is, in its judgment, detrimental to the University. Such conduct shall include cases of plagiarism, collusion, cheating, giving or receiving or offering or soliciting information on examinations, or the use of previously prepared material in examinations or quizzes. Violations should be reported to your course instructor, who will investigate and adjudicate them according the Policy on Academic Honesty of the College of Public Service. If the charges are found to be true, the student may be liable for academic or disciplinary probation, suspension, or expulsion from the University."

Text:

Ferrand, Carole T. (2007). *Speech Science: An Integrated Approach to Theory and Clinical Practice* (Second Edition). Boston, MA: Pearson Education, Inc. Allyn and Bacon. ISBN#: 0-205-48025-X.

Note: My lectures will not follow the sequence of this text, however, you will be held responsible for the materials in this book related to each topic covered in class. Please use the text's *Table of Contents* and *Index* to determine where to find readings related to each class topic.

Course Description:

This course is intended to build upon the knowledge you have already acquired in the Phonetics (CSDI 300), Anatomy & Physiology of the Speech Mechanism (CSDI 326), and Hearing Science (CSDI 329) courses. The intent of the course is to provide:

1. An overview of speech physiology and the instrumentation used to measure physiologic aspects of speech.
2. Insights in acoustic theories of speech production.
3. Experience in acoustic instrumentation, recording, and analysis equipment and procedures.
4. An overview of speech perception
5. Insights and experiences into clinical applications of these theories, instrumentation, and procedures.

These learning components will be accomplished through lectures, demonstrations, and “hands-on” activities in the laboratory activities associated with this course. The lab activities are designed to be an “exploration” activity associated with aspects of speech and/or voice. You will complete lab reports following the completion of each of your lab activities (addressed below).

Course Requirements and Grading:

Attendance and participation in class discussion and activities is required. Your performance in this class will be measured by the administration of two short-answer and short-essay type examinations (administered on February 15th and May 10th); each of these exams will comprise 35% of your final course grade. You will also be expected to locate, read, summarize, and react to ten (10) articles from professional appropriate professional journals dealing with some aspect of the measurement/analysis of speech and/or voice. These 10 “journals” will comprise 15% of your final course grade. I will provide further direction related to this journaling assignment in a separate handout. The remaining 15% of your course grade will be the result the laboratory activities and reports you will complete in this course. These laboratory assignments will be structured activities assigned at various time during the semester to provide you with “hands-on” activities to support your learning of concepts presented in my lectures. I will provide further direction related to the laboratory assignments in a separate handout.

Grading Scales: (percentage to letter grade correspondence)

100-95	A	81-78	C+
94-91	A-	77-74	C
90-89	B+	73-70	C-
88-86	B	69-60	D
85-82	B-	Below 60	F

YOU ARE STRONGLY ENCOURAGED TO STUDY TOGETHER IN GROUPS IN THIS COURSE.

Library Assistance:

It is my expectation, that you will use the library in the context of the Journaling assignments. Based on this expectation, I have invited Dr. Miriam Joseph to speak to you about library services. Please realize that Dr. Joseph is the Reference Librarian who is the library liaison with our Department and is more than willing and able to assist you in your search of information. Please use her.

Writing Center Assistance:

In this class, you are expected to write your journals and lab reports in APA style. APA style is the professional writing style of communication science and disorders professionals. I realize many of you have no experience with APA style or have other needs of support related to writing. With this in mind I strongly suggest you consider using the Writing Center on campus. The Center helps with writing projects, multimedia projects, and oral presentations. They offer one-on-one consultations that address everything from generating and developing ideas to crafting strong sentences and documentation. Call 977-2930 to schedule an appointment. They also accept drop-ins when consultants are available. For locations and hours, visit

<http://www.slu.edu/departments/sesc/acadresources/writing/index.html>.

Topics/Sequence of Course Lectures:

- Getting Started**
 - Scientific & Clinical Methods
 - The speech Chain
 - Basic Computer Instrumentation – (handout)
 - Basics of Sound – Review your Hearing Science notes & Ferrand Chapter 2
 - Recording, manipulation, and analysis of sound – Audacity Manual
- Speech Physiology**
 - Netsell Model (handout)
 - Respiration – Ferrand Chapter 4 & 5
 - Phonation – Ferrand Chapter 6, 7, & 3
 - Resonance
 - Articulation – Ferrand Chapter 8 & 9
 - Prosody
- Speech Acoustics**
 - Models of Speech Production – Ferrand Chapter 14
 - Acoustic Characteristics of Vowels – Ferrand Chapter 8 & 9, Wavesurfer Laboratory Manual, Web resource shared in lectures
 - Acoustic Characteristics of Consonants– Ferrand Chapter 8 & 9, Wavesurfer Laboratory Manual, Web resource shared in lectures
 - Acoustic Characteristics of Phoneme and Speaker Differences - Ferrand Chapter 8 & 9, (emailed handout)
- Speech Perception**
 - Models of Speech Perception – Ferrand Chapter 14
 - Perception of Speech – Ferrand Chapter 10
- Other topics as times permits**

Supportive Learning Resources:

Please note that your Ferrand text comes with a CD that provides you quiz questions and crossword puzzles related to each chapter in the text. This resource will assist you as you prepare for my exams. Additionally, in this class we will be using resources available on the World Wide Web (e.g., Audacity & Wavesurfer). Realize that there are a myriad of materials related to Speech Science (including Acoustic Phonetics & Acoustic Analysis) that maybe useful in assist you in your learning. I will share specific URLs throughout the course.