Please Note: Successful completion of this course or these slponline courses will not guarantee admission to graduate school. Your performance in these courses will not affect your undergraduate GPA, unless you are enrolled in a bachelors’ program at Longwood University. If you are transferring this course to another university, you should contact that university to understand the impact of your grade(s) on your GPA at that university.

<table>
<thead>
<tr>
<th>Instructor: Irene M. Barrow, Ph.D., CCC-SLP</th>
<th>Mailing Address: 105 Key West Lane, Newport, N.C. 28570</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email: <a href="mailto:barrowim@longwood.edu">barrowim@longwood.edu</a></td>
<td>Course Schedule: August 22, 2016 to December 2, 2016</td>
</tr>
<tr>
<td>URL:</td>
<td>Course Availability: August 17, 2016 to December 16, 2016</td>
</tr>
<tr>
<td>Phone:</td>
<td>Virtual Office: TBA as needed.</td>
</tr>
</tbody>
</table>

Course Description

An introduction to speech science theory, instrumentation, and measurement. Emphasis on normal speech perception and production. 3 credits. Pre-requisites: CSDS 307 Phonetics, CSDS 313 Anatomy and Physiology of Speech and Hearing Mechanisms, and CSDS 361 Introduction to Audiology and Hearing Science.

Required Text, Reading, and Course Materials:


NOTE: If you go to [www.pluralpublishing.com](http://www.pluralpublishing.com) you can save 15% off the list price plus free shipping, by using promotion code ST15.

**HINT:** You will find your texts from Anatomy and Physiology, Phonetics, and Audiology to be quite valuable.

IPA Symbols: Assignments that require phoneme coding shall use IPA symbols, by computer. Students should download the Pepper font from the Waisman Center at [http://www.waisman.wisc.edu](http://www.waisman.wisc.edu) (search for pepper font).

*There will be a 1-point reduction on any assignment if pepper font is not used.*
Course objectives and learning activities (and corresponding Council of Academic Accreditation in Audiology and Speech-Language Pathology Standards [CAA].)

This course will enable students to develop knowledge and skills in speech science that will serve as a foundation for the clinical disorders classes in graduate school and for your practice as a speech-language pathologist. In addition, the information on the science of speech is pertinent to a variety of other professions, such as special education, audiology, and health-related professions.

The following matrix relates the course objectives to the learning opportunities and the CAA standards.

<table>
<thead>
<tr>
<th>Student Outcome: Upon successful completion of the course, students should be able to …</th>
<th>Learning Activities</th>
<th>CAA Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Explain the physics of sound, including nature of sound and the concepts of pressure, frequency, and intensity. Describe the normal auditory capabilities with respect to auditory sensitivity, loudness and pitch perception and binaural hearing.</td>
<td>Terminology portfolio Laboratory Assignment 1 Quiz 1</td>
<td>Standard 3.1 B Acquire and demonstrate knowledge of basic human communication and swallowing processes, including their biological, neurological, acoustic, psychological, developmental, and linguistic and cultural bases.</td>
</tr>
<tr>
<td>2. Explain the process of normal and disordered respiration and how it relates to speech production.</td>
<td>Terminology portfolio Laboratory Assignment 2 Quiz 2</td>
<td>Acquire and demonstrate knowledge of the nature of speech, hearing, and communication disorders and differences. Including … characteristics, anatomical/physiological, acoustic … correlates.</td>
</tr>
<tr>
<td>3. Explain the process of normal and disordered phonation and how it relates to speech production.</td>
<td>Terminology portfolio Laboratory Assignment 3 Quiz 3</td>
<td></td>
</tr>
<tr>
<td>4. Explain the process of normal articulation and resonance and how these influence speech production and perception. Analyze spectrograms.</td>
<td>Terminology portfolio Laboratory Assignment 4 Quiz 4</td>
<td></td>
</tr>
<tr>
<td>5. Explain the processes of speech perception</td>
<td>Laboratory Assignment 5 Terminology portfolio Final exam</td>
<td></td>
</tr>
<tr>
<td>6. Identify the instrumentation used in the study of speech</td>
<td>Terminology portfolio All laboratory assignments</td>
<td></td>
</tr>
</tbody>
</table>
Technology Requirements:

- A high speed internet connection will be necessary to view the video clips linked to the presentations. If you are using a dial-up service, you may not be able to access the videos.

- Windows Media Player will be necessary in order to view the video clips. It is available as a free download from www.microsoft.com

- Submit assignments and projects as Microsoft documents (either Word, PowerPoint, Excel, etc as required by the assignment). The accepted formats are: .doc; .docx; .rtf; .pdf; .ppt. The use of the .wps format is not acceptable.

- View presentations with Microsoft PowerPoint.

- E-mail communication will be conducted through the Canvas system. If it becomes necessary to contact me through my Longwood address you must include the course and section number in which you are enrolled in the heading of the email.

- All students are required to maintain high speed internet access. Failure to update passwords or access to the internet are not “technical difficulties” and will not be accepted as extenuating circumstances for assignment submission or for taking quizzes.

- Attempting to submit work very close to the closing time may result in assignments not being uploaded into the Canvas system. Such instances are not considered technical difficulties. It is each student’s individual responsibility to submit work within the stipulated time frame as no late is accepted.

Disability Accommodations: Students needing an accommodation for a disability must speak with the instructor during the first week of class. Students shall provide documentation from the Disability Support Center at Longwood University. All accommodations identified by the Disability Support Center will be provided.

Religious Holidays: The Instructor will accommodate adjustments to due dates that conflict with a student’s religious observation, if informed in writing by the end of the first week of class.

Honor Code
All written work submitted for this class must be pledged with the Longwood Honor Code. Students shall write, in their own handwriting, and sign the following:
“T have neither given nor received help on this work nor am I aware of any infraction of the Honor Code.”

There will be a 2-point deduction if not included on any assignment (terminology portfolio, lab), quiz, or the final.

Course Policies:

Policy on Response to Learner Communication or Assignment. Interaction between learners and the instructor is an important component to the success of online learning. Learners can expect timely
responses from the instructor (generally within one to two business days). Communications which are sent after noon on Friday or on weekends/holidays will be addressed on the next business day. Every effort will be made to review and grade written assignments within 10 business days. When possible, the instructor will notify learners in advance of days when not available.

**Interaction with Instructor.** The instructor is available by email in the Canvas course and through the Question and Answer section in the Discussion area. The Question and Answer section in the discussion area is a great place to ask content and assignment questions as all students will see the questions and answers posted. This section should never be used to ask questions pertaining to individual grades or circumstances.

**Assignment Due Dates**- All assignments are due as posted in the timeline. Be sure to participate in the discussion boards early and frequently for best responses and participation.

**Responsibilities of the Learner**- all learners are expected to abide by the Honor Code, and respect the intellectual property and copyright of others. Learners are expected to complete all assignments within the module timeline, including group projects. Assignments turned in after the completion of a module will not be considered for grading. Learners agree to interact with others in the course in a courteous and professional manner, recognizing the value of others opinions. Learners will recognize that they are part of a larger community of learners and that their diligent and regular participation in this course is to the benefit of all learners. Failure to treat others with respect and courtesy will result in removal from a group assignment and a grade of “0” for the assignment.

It is an **individual responsibility** to preview work in the grade book to be sure that what was intended for submission was actually submitted and it is in an appropriate format. The assignment links will accept new uploads until the due date and time expires. Thus, if you preview your submission and discover that the wrong file was uploaded, you can resubmit the correct assignment without having to contact me. Blackboard always shows me the most recent submission first. **Once the due date/time has expired, only what is submitted will be graded.** There will not be another opportunity to submit the work. You are responsible for ensuring that you have submitted what you want graded and it is in one of the accepted formats. Remember, no late work is accepted for grading. **You are responsible for checking your work in the grade book after you submit it.** I will not check it for you and will only grade what has been submitted.

**Policy on Plagiarism.** The content (including the organization and the specific wording) of articles whether online, in textbooks, or in journals is the intellectual property of the author. As such, students in this course are expected to demonstrate respect for intellectual property by carefully following acceptable practices for giving authors credit for their work. Students will be expected to follow APA guidelines for citation and referencing for all written work (including discussion forums, reports, and presentations) which reports, describes, or explains the work of others. Visit the following site to gain a better appreciation of how to quote, paraphrase, cite, and reference:  
http://www.indiana.edu/~wts/pamphlets/plagiarism.shtml#wwwplagiarism

The following sites contain information on how to use the APA citation style:

https://owl.english.purdue.edu/owl/resource/560/01/
http://www.apastyle.org/
https://www.library.cornell.edu/resrch/citmanage/apa
These are not the only sites available. Each student may locate other sites providing information on the APA citation format. The APA citation format is the expected referencing style for both Speech-Language Pathology and Audiology. It is required for this course.

Referencing course PowerPoints is not appropriate as they are equivalent to in-class lectures. Thus, using them as a reference is like saying, “because you said this in class…” It is expected that reference material come from academic sources other than the required text book or the provided course materials. Be careful of the sites used to obtain information. Such sites as Wikipedia, YouTube, WebMD and many others are not academic sources and are not acceptable in this course. Some examples of acceptable sites include: ASHA, NIH, Official trusted organizations like the American Heart Association, published journal articles and text books.

Mandatory Reporting of Crimes and Sexual Misconduct

In accord with its history and mission, Longwood University believes that each individual should be treated with respect and dignity and that any form of crime or violence is incompatible with Longwood’s commitment to the dignity and worth of the individual. Longwood University is committed to providing a healthy living, learning and working environment which promotes personal integrity, civility and mutual respect. If you have been the victim of a crime or sexual misconduct we encourage you to report this. If you disclose this to a faculty member or employee (with the exception of our Limited Reporting and Confidential Reporting Resources; for example, the Counseling and Psychological Services (CAPS) staff), they are required by law to notify the appropriate University officials. The faculty member or employee cannot maintain complete confidentiality and is required to report the information that has been shared. Please know that all reported information is treated with discretion and respect and kept as private as possible. For more information about your options at Longwood:

http://www.longwood.edu/titleix

http://www.longwood.edu/police/crimereports.htm

http://www.longwood.edu/studentconduct/12050.htm

References

References are expected on ALL assignments, using the American Psychological Association (APA) style. See the Greenwood Library web site for information.

5 Points will be deducted from each assignment for failure to use APA style.

Policy on Late Work. Learners are expected to submit assignments by the designated date. Submit assignments through the Canvas site. If the links are not functioning within Canvas and it is prior to the assignment deadline, email the assignment to the instructor within the Canvas system. Work may not be turned in late. It is important that you notify the instructor as soon as possible if you are experiencing any problems with an assignment. If emergency, extenuating circumstances arise, adequate documentation must be submitted to the instructor for consideration. Adaptations to the
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schedule are at the discretion of the instructor. Submission of documentation does not guarantee that an adaptation will be granted.

**Extra credit** – There will be no opportunity for individual extra credit work in this course.

**Honor Code**: Learners enrolled in this course are expected to abide by the Longwood University Honor Code when completing assignments and interacting with learners. This code is an affirmation of personal integrity and an acceptance of personal responsibility. For more information about Longwood’s Honor Code visit: http://www.longwood.edu/judicial/the%20philosophy%20of%20The%20Honor%20Code.htm

Learners will be expected to read and sign an Assurance Statement of the academic pledge at the beginning of the course. It is understood that this code applies to all works submitted as part of this course. The Assurance Statement document can be found in the Introduction section of the course. Suspicion of any honor-related violation will be investigated and university policy will be followed.

**Disability Statement**: The instructor is willing to meet reasonable accommodations for any learners with a documented disability. The learner should submit supporting material to the Longwood University Academic Support Center which will then inform the instructor of the necessary accommodations. Submit the necessary documentation by the end of the first scheduled day of the online class. Requests to alter the course in any way on an individual basis will not be honored unless the proper procedure has been followed and official documentation has been received. Accommodations, if appropriate, are not retroactive.

**Students who are successful in this course:**

- Devote a block of time each day to course work. Expect to spend 6-8 hours per week (including class time) on this course
- Enter Canvas frequently to read announcements or to work on content
- Create a personal plan for how/when to complete content and assignments.
- Complete all assigned readings
- Make use of the additional activities that supplement the textbook as study aides.
- Complete assignments according to directions and submit by the due dates
- Interact frequently with other members of the learning community (other students and instructor).
- E-mail the instructor with problems and concerns sooner rather than later.

**Course Requirements:**

**Canvas** – Each student is responsible for verifying his or her access to Canvas, CDIS 450. Announcements will be posted as needed. All documents and discussions are available from the beginning of the course. Use Google Chrome to access Canvas. Do not use Internet Explorer to access the Canvas system. Contact the Longwood University Help Desk if you have any questions regarding browsers or accessing Canvas.

**Introduction** – All students will complete and submit the Assurance Statement and the Introductory Quiz prior to gaining access to the rest of the course modules. The Introductory Quiz contains questions pertaining the syllabus, course policies and course navigation. It must be completed repeatedly until a score of 100% is achieved. Once the quiz has met the 100% requirement and the
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Assurance Statement has been successfully submitted, all of the course modules will automatically become available. Failure to complete these two items will result in the inability to access any further module in the course.

**Mathematics and Phonetics Pre-tests.** Due the importance of having a solid foundation in basic math skills and phonetics to be successful in this class. A Pre-test will be conducted during the first week.

Students not achieving 25/30 points (or higher) on the first attempt will need to restudy, participate in tutoring with the Graduate Assistant on-line, or secure another source of tutoring and retake the test to earn at least 25/30 points. The grade entered for this assignment will be the grade earned the first administration (if greater than or equal to 25 points) or an average of the first and second administration.

**Terminology Portfolio.** (100 pts total). Each unit will have a group of terminology for student that will be explained in this portfolio. References shall be included. See further directions in each module.

**Laboratory Assignments.** (300 points total) Each unit concludes with an Laboratory Assignment. Students will complete an assignment that includes laboratory activities to and application questions.

**Quizzes:** There will be a quiz at the conclusion of each unit. (4 quizzes for 100 points total). The information in unit 5 will be assessed in the final, without a quiz. Quizzes are posted as indicated by the schedule. All quizzes will disappear at the conclusion of the quiz period. Once the quiz has disappeared the opportunity to complete it has ended. *If difficulty should arise during a quiz, a screen shot of the difficulty must accompany your immediate email to the instructor for consideration to have the quiz reset. Failure to comply with this procedure will result in the quiz not being reset.*

**Cumulative Final Exam.** (100 points).

**Reading Participation.** (30 points) Regularly, as assigned, students shall submit comments on the discussion board, reflecting the readings and class material.

This post will identify one interesting new piece of information, with 3-4 sentences that reflect integration of your reading with the information presented in this or prior CSD classes. Students will earn 1 or 2 points per post.

- 0 pts = does not reflect reading of material
- 1 pt. = minimally reflects reading
- 2 pts = some demonstration of comprehension of the material
- 3 pts = clearly demonstrates your comprehension of the reading material

**Course Schedule:**

*All assignments are due by 11:00pm EST on the final date of the module. All quizzes are due according to the posted times in the chart below. All instructions and links are available from the first day of class and can be submitted at any time prior to the due date. Course due dates are not adjusted for individual schedules. Late submissions are not accepted. Grading will occur once the due date has elapsed. The instructor reserves the right to make alterations to this schedule as needed.*
<table>
<thead>
<tr>
<th>MODULE</th>
<th>READING</th>
<th>DISCUSSION BOARD</th>
<th>TERMINOLOGY PORTFOLIO</th>
<th>LAB PROJECT</th>
<th>QUIZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module I: Introduction to Acoustics August 22 – September 2, 2016</td>
<td>Mathematics and Phonetics Pretest due by August 30, 2016 Chapters 1 &amp; 2</td>
<td>Post due by 11:00 pm EST August 26, 2016</td>
<td>Submission due by 11:00 pm EST August 26, 2016</td>
<td>Submission due by 11:00 pm EST August 31, 2016</td>
<td>Available: 8:00 am EST 9-01-16 to 8:00 pm EST 9-02-16*</td>
</tr>
<tr>
<td>Module II: Respiration September 2 –23, 2016</td>
<td>Chapter 3</td>
<td>Post 1 due by 11:00 pm EST September 16, 2016 Post 2 due by 11:00pm Est September 21, 2016</td>
<td>Submission due by 11:00 pm EST September 16, 2016</td>
<td>Submission due by 11:00 pm EST September 21, 2016</td>
<td>Available: 8:00 am EST 9-22-16 to 8:00 pm EST 9-23-16</td>
</tr>
<tr>
<td>Module III: Phonation September 24 – October 14, 2016</td>
<td>Chapters 4 &amp; 5</td>
<td>Post 1 due by 11:00 pm EST October 7, 2016 Post 2 due by 11:00pm October 12, 2016</td>
<td>Submission due by 11:00 pm EST October 7, 2016</td>
<td>Submission due by 11:00 pm EST October 12, 2016</td>
<td>Available: 8:00 am EST 10-13-16 to 8:00 pm EST 10-14-16</td>
</tr>
<tr>
<td>Module IV: Articulation &amp; Resonance October 15 – November 4, 2016</td>
<td>Chapters 6 &amp; 7</td>
<td>Post 1 due by 11:00 pm EST October 21, 2016 Post 2 due by 11:00pm Est, October 28, 2016 Post 3 due by 11:00pm EST, November 2, 2016</td>
<td>Submission due by 11:00 pm EST October 28, 2016</td>
<td>Submission due by 11:00 pm EST November 2, 2016</td>
<td>Available: 8:00 am EST 11-03-16 to 8:00 pm EST 11-04-16</td>
</tr>
</tbody>
</table>
Module V: Speech Perception
November 5 – November 23, 2016

<table>
<thead>
<tr>
<th>Chapters 8 &amp; 9</th>
<th>Post 1 due by 11:00 pm EST November 11, 2016</th>
<th>Submission due by 11:00 pm EST November 18, 2016</th>
<th>Submission due by 11:00 pm EST November 23, 2016</th>
<th>Final Exam Available: 8:00 am EST 12-01-16 to 8:00 pm EST 12-02-16</th>
</tr>
</thead>
</table>

*All quizzes will be posted from 8:00 am EST on the first day until 11:00 pm EST on the second day. All quizzes must be finished by 11:00 pm EST on the second date. For example, the first quiz will become available at 8:00 am EST September 1, 2016 and will remain available until 11:00 pm EST on September 2, 2016. All quizzes/exams will become unavailable at 11:00 pm EST on the second date and the opportunity to take the quiz will expire. It is each student’s responsibility to make note of timelines and taking quizzes/exams late is not allowed. All quizzes are timed and will automatically discontinue at the end of the allotted time. Also, in order to allow yourself the allotted time, you must enter the quiz with enough time to complete it. For example, if you enter the quiz at 10:30 pm on the second date, you have limited your time to complete it to 30 minutes. Please plan your time accordingly, as the quiz will not be reset due to timeliness. For all quizzes and exams, you may enter the quiz or exam only once. Thus, once it is begun, it must be completed during the same session.

**Final Exam: Thursday, December 1, 2016 – December, May 2, 2016:** The final exam will be available for 39 hours. It will become available at 8:00 am EST on December 1, 2016 EST and will remain available until 11:00 pm EST on December 2, 2016 EST. All exams must be finished by 11:00 pm EST on December 2, 2016 EST. Please plan your time accordingly.

**Grades and Grading Scale:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phonetics and Mathematics pre-tests</td>
<td>46</td>
</tr>
<tr>
<td>Introductory Quiz</td>
<td>15</td>
</tr>
<tr>
<td>Lab 1 – 5</td>
<td>286</td>
</tr>
<tr>
<td>Quizzes</td>
<td>102</td>
</tr>
<tr>
<td>Terminology Portfolio</td>
<td>100</td>
</tr>
<tr>
<td>Final (cumulative)</td>
<td>88</td>
</tr>
<tr>
<td>Discussion Board</td>
<td>30</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>667</td>
</tr>
</tbody>
</table>

**Grading Scale**

A: 626-667
A-: 600-625
B+: 586-599
PCSD 450: Speech Science Fall 2016
B 560-585
B-: 533-559
C+: 520-532
C: 493-519
C-: 466-492
D+ 453-465
D: 426-453
D-: 400-425 (UNDERGRADUATES ONLY)
F: <399 Undergraduate  < 465 Graduate

Additional Resources