Instructor: William R. Culbertson, Ph.D.
Office: Room 231 B
Phone: 928-523-7440
Office Hours: Posted and By Appointment
Email: bill.culbertson@nau.edu
Time/Place: T-Th, 11:10-12:25 / CHP 321

SST 251 has a course shell in the BBLearn platform.

Course prerequisites: None

Course description: “STRUCTURE AND FUNCTIONS OF THE MECHANISMS USED IN SPEECH AND LANGUAGE.” SST 251 consists of lectures and demonstrations to accompany assigned readings in the required text. In addition to the required readings, the student is encouraged to pursue other material related to the subject of focus. Additional study aids will include models, videotapes, and instructor-prepared materials, available through the department office and the Cline Library.

Learner (Course) Objectives:

GOAL: SST 251 is intended to provide the prospective speech/language pathologist with a working knowledge of human anatomy/physiology as it relates to the process of communication. The successful student of SST 251 will:

1. Develop a general orientation to Anatomy/Physiology as sciences, including their branches and relationships.
2. Learn the basic types, locations and functions of cells and tissues in the human body.
3. Learn the form and function of the respiratory mechanism, especially as it applies to the production of speech.
4. Learn the form and function of the phonatory mechanism, especially as it applies to the production of speech.
5. Learn the form and function of the oral, nasal and pharyngeal mechanisms and understand how they coordinate in the articulation of speech.
6. Summarize the coordination of form and function in the respiratory, phonatory, articulatory, nervous and auditory systems (as time permits) for the production of speech.
7. Apply the anatomy and physiology of the speech mechanism to the functions of mastication and deglutition.
*Note: SST 376, Hearing Science and SST 405, Neurological foundations of Speech, Language and Hearing, present detailed content about the anatomy and physiology of the human auditory and nervous systems.

**Outcome Measures:**

1. Students will respond to section test items with 70% or greater accuracy.
2. Students will respond to a comprehensive final examination with 70% or greater accuracy.
3. Students will prepare a usable portfolio of material covered in the course including material gathered as part of the regular lectures and material gathered independently.
4. Students will write a summary describing how the mechanisms of respiration, phonation and articulation, governed by the nervous system, act together to produce speech.

**Course Structure/approach:** SST 251 consists of lectures and demonstrations to accompany assigned readings in the text. In addition to the readings, the student is encouraged to pursue other material related to the subject of focus. Additional study aids will include models, videotapes, and instructor-prepared materials, available through the department office and the Cline Library.

**Web Notes:**

Lecture notes are available online through the BBLearn shell.

**Text:**


**Suggested Workbook:**


**Class Schedule:**

I. Introduction and Orientation to Anatomy and Physiology  
II. Cytology and Histology  
III. The Respiratory Mechanism  
IV. The Phonatory Mechanism

**TEST:** Sections I, II  
**TEST:** Section III  
**TEST:** Section IV

08/27/12
V. The Articulatory Mechanism

Evaluation methods and deadlines

Students will be graded according to their scores on section tests, the final examination and by their preparation of an anatomy portfolio.

Guidelines for Evaluation Mechanisms

Section Tests: There will be four section tests and a final examination. Each test will cover the indicated sections and will be presented on the dates indicated.

Tests are administered online through the BBLearn shell, and the times the tests will be available will be announced in class. Students will have up to four opportunities to take the tests, and the final test score will be the highest of the four attempts. Students do not have to take the additional attempts for a test if they are satisfied with their grade for the first attempt.

The Final Examination will be presented online during examination week. Final examination test items will be taken from the entire course's material.

Anatomy Portfolio: The anatomy portfolio is a demonstration and record of your studies in this class. Students are encouraged to be creative in preparing this portfolio, because it will serve them throughout their educational experiences. The portfolio should consist of a minimum of seven sections. The first section will consist of a narrative describing the coordination of the respiratory, phonatory, articulatory and nervous systems. See course objective 8. This is followed by one section for each of the course sections, detailing your studies in each area.

Students should begin preparing the portfolio on the first day of class, and continue the project throughout the term. Portfolios that are put together at the last minute are easy to spot and rarely receive full credit.

The Speech Analysis Paper is due DECEMBER 6, 2012.

The overall semester's grade will be computed by a method that credits the average of the section tests and final examination with 2/3 of the total value and the anatomy portfolio with 1/3 of the total value. Students can earn up to 150 total points for work performed in the course: 100 for the examinations and 50 for the Anatomy Portfolio.

GRADE POINT SCALE: The grade point scale is based on 150 possible points. Assignment of letter grades is as follows:

A = 90% to 100%  C = 70% to 79%  F = <60%
B = 80% to 89%  D = 60% to 69%
PORTFOLIO ACADEMIC INTEGRITY:

Portfolio Grading Criteria

Portfolios will be graded according to this rubric:

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<tr>
<th>Criteria</th>
<th>Percentage</th>
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<tr>
<td>Covers all aspects (sections) of course and was developed throughout the term</td>
<td>35%</td>
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<td>Entire portfolio is well-organized and neat</td>
<td>10%</td>
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<td>Students adds relevant material <em>not</em> provided by instructor</td>
<td>30%</td>
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<tr>
<td>Speech Systems Narrative</td>
<td>25%</td>
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</table>
Giving or taking material directly to or from another student’s portfolio, past or present, is academically dishonest, and will be dealt with according to the NAU Academic Integrity Policy.

Speech Analysis Paper Scoring Guide

Speech analysis papers will be graded according to this guide:

"Write a summary describing how the mechanisms of respiration, phonation and articulation, governed by the nervous system, act together to produce speech."

A (Superior) 100%
An “A” paper demonstrates probing critical reading and/or analysis. It thoroughly evaluates various elements of its subject matter with creative, detailed reasoning and use of evidence. It demonstrates the student's strength in understanding the topic. Its organization shows a logical arrangement of parts, and all parts are relevant to the thesis. The thesis statement expresses a clear, confident stance and provides an accurate, concise forecast of topics to be developed. Paragraphs have a sharp focus and include carefully selected evidence. Sentences within paragraphs are linked by tight logical connections and effective transitions. Documentation, when needed, conforms to all appropriate conventions. Sentences are varied in structure and imaginative in style; wording is concise; style and tone create a distinctive voice. The final, revised paper is free of all serious errors in grammar and punctuation. There are no misspellings.

B (Strong) 85%
A “B” paper shows good critical reading skills and offers convincing reading and evidence; the parts of the essay are logically arranged and relevant to the topic. The paper demonstrates the student's understanding of the topic, but may not be sufficient to be rated as "strong." Paragraphs are unified, and supporting details are sufficient and relevant. Documentation, when needed, conforms to most appropriate conventions. Sentences are linked by logical connections and adequate transitions. Sentences show variety. Wording is, for the most part, concise and appropriate. The paper contains very infrequent errors in grammar, punctuation, and spelling.

C (Competent) 75%
A “C” paper demonstrates an understanding of texts and materials, and treats the topic sufficiently. The paper conveys the student's general understanding of basic processes involved. Paragraphs and supporting details relate to the topic, but may do so only generally. The sentences within the paragraphs are, for the most part, related and contain adequate transitions. (Transitions between paragraphs, however, may be unclear or missing at times.) Sentence style may consist of relatively simple sentence patterns. Word choice is largely appropriate, but may sometimes be problematic—simplistic or repetitive, perhaps. Mistakes in grammar, punctuation, documentation, and spelling may occur with some frequency, but most of these elements of the paper should be correct on the final, revised copy.

D (Below Average) 65%
The below average paper suggests the student has an incomplete understanding of the topic. The paper also fails to practice one or more of the principles of critical reading or writing. For instance, it may show an inability to correctly identify the main idea of a text. It may attempt to defend its thesis in illogical or unconvincing ways. The paper may resort excessively to summary. The paper may lack content and repeat ideas or “pad” simply to fill space. The paragraphs may lack topic sentences. Some paragraphs may lack adequate supporting detail or may wander from the main idea. Documentation may be faulty. Sentences within paragraphs are only loosely related, and
transitions are missing. Sentences may be excessively wordy or vague. Style and word choice are flat, inconsistent, or inappropriate to the audience. The paper displays major or repeated errors in grammar, punctuation, and spelling, even in the final revised copy.

**F (Failure) 50%**

An “F” paper demonstrates that the student does not grasp the principles of the topic. Like a D paper, it also shows a failure to practice one or more of the principles of critical reading or writing, but an F paper reveals persistent problems, such as the following: the paragraphs lack focus; sentences within the paragraphs are unrelated to the main idea, and transitions are missing; sentences are faulty in structure, or vague, wordy, and irrelevant; word choice is inappropriate, incorrect, or inconsistent; frequent major errors in grammar, punctuation, documentation, and spelling indicate an inability to handle the conventions of written discourse; there are excessive misspellings. A paper that fails entirely to address the assignment topic also merits an “F.”

*Based on: Belmont University Department of English as transmitted through NAU Office of Academic Assessment*
Course Policies:

**Code of Academic Integrity**

Students are expected to adhere to the Code of Academic Integrity. Read the full Code at: http://jan.ucc.nau.edu/academicadmin/plcystmt.html

**NORTHERN ARIZONA UNIVERSITY**

**POLICY STATEMENTS**

**SAFE ENVIRONMENT POLICY**

NAU’s Safe Working and Learning Environment Policy seeks to prohibit discrimination and promote the safety of all individuals within the university. The goal of this policy is to prevent the occurrence of discrimination on the basis of sex, race, color, age, national origin, religion, sexual orientation, disability, or veteran status and to prevent sexual harassment, sexual assault or retaliation by anyone at this university.

You may obtain a copy of this policy from the college dean’s office. If you have concerns about this policy, it is important that you contact the departmental chair, dean’s office, the Office of Student Life (523-5181), the academic ombudsperson (523-9368), or NAU’s Office of Affirmative Action (523-3312).

**STUDENTS WITH DISABILITIES**

If you have a documented disability, you can arrange for accommodations by contacting the office of Disability Support Services (DSS) at 523-8773 (voice), 523-6906 (TTY). In order for your individual needs to be met, you are required to provide DSS with disability related documentation and are encouraged to provide it at least eight weeks prior to the time you wish to receive accommodations. You must register with DSS each semester you are enrolled at NAU and wish to use accommodations.

Faculty are not authorized to provide a student with disability related accommodations without prior approval from DSS. Students who have registered with DSS are encouraged to notify their instructors a minimum of two weeks in advance to ensure accommodations. Otherwise, the provision of accommodations may be delayed.

Concerns or questions regarding disability related accommodations can be brought to the attention of DSS or the Affirmative Action Office.

**INSTITUTIONAL REVIEW BOARD**

Any study involving observation of or interaction with human subjects that originates at NAU, including a course project, report, or research paper, must be reviewed and approved by the Institutional Review Board (IRB) for the protection of human subjects in research and research-related activities.

The IRB meets once each month. Proposals must be submitted for review at least fifteen working days before the monthly meeting. You should consult with your course instructor early in the course to ascertain if your project needs to be reviewed by the IRB and/or to secure information or appropriate forms and procedures for the IRB review. Your instructor and department chair or college dean must sign the application for approval by the IRB. The IRB categorizes projects into three levels depending on the nature of the project: exempt from further review, expedited review, or full board review. If the IRB certifies that a project is exempt from further review, you need not resubmit the project for continuing IRB review as long as there are no modifications in the exempted procedures.

08/27/12
A copy of the IRB Policy and Procedures Manual is available in each department's administrative office and each college dean's office. If you have questions, contact Carey Conover, Office of Grant and Contract Services, at 523-4889.

Academic Integrity

The university takes an extremely serious view of violations of academic integrity. As members of the academic community, NAU's administration, faculty, staff and students are dedicated to promoting an atmosphere of honesty and are committed to maintaining the academic integrity essential to the education process. Inherent in this commitment is the belief that academic dishonesty in all forms violates the basic principles of integrity and impedes learning. Students are therefore responsible for conducting themselves in an academically honest manner.

Individual students and faculty members are responsible for identifying instances of academic dishonesty. Faculty members then recommend penalties to the department chair or college dean in keeping with the severity of the violation. The complete policy on academic integrity is in Appendix F of NAU's Student Handbook.

Academic Contact Hour Policy

The Arizona Board of Regents Academic Contact Hour Policy (ABOR Handbook, 2-206, Academic Credit) states: “An hour of work is the equivalent of 50 minutes of class time at least 15 contact hours or recitation, lecture, discussion, testing or evaluation, seminar, or colloquium as well as a minimum of 30 hours of student homework is required for each unit of credit.”

The reasonable interpretation of this policy is that for every credit hour, a student should expect, on average, to do a minimum of two additional hours of work per week; e.g., preparation, homework, studying.

All Students Should Read The NAU Student Handbook

You are expected to follow the guidelines contained in the NAU Student Handbook. If you have any questions regarding the policies contained in the handbook, ask your instructor or academic advisor.

Resources for Student Success

Successful university students take advantage of services and resources designed to boost learning and achievement. NAU recommends that you begin with:

- **MyFoundations** - use this online tool to assess and develop required university skills at your own pace (free for first-time freshmen at NAU Flagstaff)
- **Supplemental Instruction** - attend these course-specific review sessions whenever offered; proven to reduce D’s and F’s
- **Student Learning Centers** - free drop-in, online, and individual tutoring appointments for math, writing, and over 100 courses; available Monday through Friday
- **ResourceConnect** - your online central navigation point for all NAU
student resources
For a full-listing of University College services visit:
http://nau.edu/University-College/
MyFoundations one page fact sheet

Need to fill a gap? Brush up on your skills? Whether you need to get up to speed for your calculus class or brush up on your essay writing skills, the MyFoundations Self-Assessment and Development tool gets you on track for university-level academics.

Free to all incoming first-year NAU Flagstaff students- topics include:
- Math
- Reading
- Writing
- Study Skills

How it works
1. Self-Assess: Complete a path builder assessment in the topic area of your choice, which creates specific modules for your personalized learning path based on your demonstrated needs for improvement or development
2. Self-Develop: Complete the learning paths for mastery
   - Instant feedback
   - Choose activities that fit your learning style
   - Work at your own pace

Where to find it- MyFoundations is in your course list in BbLearn

The above hyperlink will be activated prior to the start of the 2012 term.
This section is provided for students who wish to apply for professional certification through the American Speech-Language-Hearing Association (ASHA). It can be used to complete the "Knowledge and Skills Assessment (KASA)" form required by that body.

Note that the entry-level educational requirement for professional certification is the master's degree or its equivalent.

ASHA "Knowledge and Skills" or "KASA" Standard III Matrix

<table>
<thead>
<tr>
<th>Learner Outcomes</th>
<th>Assessment Method</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
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<tr>
<td>Develop a general orientation to Anatomy/Physiology as sciences, including their branches and relationships.</td>
<td>Portfolio</td>
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<td>Learn the basic types, locations and functions of cells and tissues in the human body.</td>
<td>Section Test</td>
<td>X</td>
<td>X</td>
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<td>Learn the form and function of the respiratory mechanism, especially as it applies to the production of speech.</td>
<td>Section Test</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Learn the form and function of the phonatory mechanism, especially as it applies to the production of speech.</td>
<td>Section Test</td>
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<tr>
<td>Learn the form and function of the oral, nasal and pharyngeal mechanisms and understand how they coordinate in the articulation of speech.</td>
<td>Section Test</td>
<td>X</td>
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<td>Task</td>
<td>Assessment Type</td>
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<td>Learn the basic structure and function of the human nervous system</td>
<td>Section Test</td>
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<td>and major points about its function in the expression and reception</td>
<td>of language.</td>
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<td>Learn the form and function of the major divisions of the human</td>
<td>Section Test</td>
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<td>auditory mechanism (optional).</td>
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<td>Summarize the coordination of form and function in the respiratory,</td>
<td>Portfolio Essay</td>
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<td>phonatory, articulatory, nervous and auditory systems (as time</td>
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<td>permits) for the production of speech.</td>
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<td>Apply the anatomy and physiology of the speech mechanism to the</td>
<td>Portfolio Essay</td>
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