

Term Information

Effective Term Autumn 2023
Previous Value Autumn 2013

Course Change Information

What change is being proposed? (If more than one, what changes are being proposed?)

Addition of a distance learning offering of the course. It is currently approved for in-person only.

What is the rationale for the proposed change(s)?

Our undergraduate students have responded well to expanded DL offerings and the flexibility they provide for scheduling. We also hope to recruit for DL students from regional campuses and outside of Ohio as our UG program's DL offerings grow.

What are the programmatic implications of the proposed change(s)?

(e.g. program requirements to be added or removed, changes to be made in available resources, effect on other programs that use the course)?

The BA curriculum does not change. We are growing toward a fully DL program pathway that students could choose to use, but that has not yet been submitted and is still pending additional future DL course approvals.

Is approval of the request contingent upon the approval of other course or curricular program request? No

Is this a request to withdraw the course? No

General Information

Course Bulletin Listing/Subject Area	Speech and Hearing Science
Fiscal Unit/Academic Org	Speech & Hearing - D0799
College/Academic Group	Arts and Sciences
Level/Career	Undergraduate
Course Number/Catalog	4420
Course Title	Anatomy, Physiology and Science of Speech
Transcript Abbreviation	Sp Sci, Anat/Phys
Course Description	Anatomy and physiology of the structures involved in speech production and the acoustic characteristics of speech sounds.
Semester Credit Hours/Units	Fixed: 3

Offering Information

Length Of Course	14 Week, 12 Week
Flexibly Scheduled Course	Never
Does any section of this course have a distance education component?	Yes
Is any section of the course offered	100% at a distance
<i>Previous Value</i>	<i>No</i>
Grading Basis	Letter Grade
Repeatable	No
Course Components	Lecture, Recitation
Grade Roster Component	Lecture
Credit Available by Exam	No
Admission Condition Course	No
Off Campus	Never

Campus of Offering Columbus

Prerequisites and Exclusions

Prerequisites/Corequisites Prereq: 3320, or equiv course in Phonetics, and Biology 1101, 1102, 1113, 1114, 1115H, or 1116H.
Previous Value Prereq: 3320 (320), or equiv course in Phonetics, and Biology 101, 102, 113, 114, 115H, or 116H.

Exclusions
Previous Value Not open to students with credit for 420.

Electronically Enforced No

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code 51.0201
Subsidy Level Baccalaureate Course
Intended Rank Freshman, Sophomore, Junior, Senior

Requirement/Elective Designation

Required for this unit's degrees, majors, and/or minors

Course Details

Course goals or learning objectives/outcomes

- Understand the more detailed structure of the human skeletal system.
- Understand the more detailed structure and function of the human muscular system.
- Explain the detailed structure and functioning of the respiratory system for speech purposes.
- Explain the detailed structure and functioning of the larynx for speech purposes.
- Explain the detailed structure and functioning of the oropharyngeal and pharyngeal passages for speech purposes.
- Describe the interconnections among physiologic, aerodynamic, and acoustic aspects of the speech production mechanism.

Previous Value

- *Develop an understanding of the anatomical and physiological bases for and constraints on the production of human speech sounds (speech science)*
- *Develop an understanding of the anatomical and physiological bases for and constraints on normal and disordered phonation (voice science)*
- *Develop an elementary understanding of the source-filter theory of acoustic phonetics (acoustics)*

Content Topic List

- Anatomical and physiological bases for and constraints on the production of human speech sounds (speech science)
- Anatomical and physiological bases for and constraints on normal and disordered phonation (voice science)
- The source-filter theory of acoustic phonetics (speech acoustics)

Sought Concurrence No

COURSE CHANGE REQUEST
4420 - Status: PENDING

Last Updated: Vankeerbergen, Bernadette
Chantal
11/22/2022

Attachments

- SHS4420_FA2023_DL_Syllabus.docx: Proposed DL syllabus
(Syllabus. Owner: Bielefeld, Eric Charles)
- SHS4420_syllabus_Fall 2021.pdf: In-person syllabus
(Other Supporting Documentation. Owner: Bielefeld, Eric Charles)
- SPHHRNG 4420 DL cover sheet.pdf: ASC Tech cover sheet
(Cover Letter. Owner: Bielefeld, Eric Charles)

Comments

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Bielefeld, Eric Charles	11/17/2022 01:04 PM	Submitted for Approval
Approved	Fox, Robert Allen	11/17/2022 07:39 PM	Unit Approval
Approved	Vankeerbergen, Bernadette Chantal	11/22/2022 11:35 AM	College Approval
Pending Approval	Cody, Emily Kathryn Jenkins, Mary Ellen Bigler Hanlin, Deborah Kay Hilty, Michael Vankeerbergen, Bernadette Chantal Steele, Rachel Lea	11/22/2022 11:35 AM	ASCCAO Approval



SYLLABUS

SHS 4420

Anatomy, Physiology, and Science of Speech

Autumn 2023 (full term)

3 credit hours

Online

COURSE OVERVIEW

Instructor Team

Instructor: Dr. Youkyung Bae

Email address: bae.180@osu.edu (preferred contact method)

Phone number: 614-688-4948

Office hours: Tuesdays, 2-3 pm via Carmen

Teaching Assistant: TBD

Email address: TBD

Prerequisites

The prerequisite for this course includes SHS 3320 (Principles of Phonetics), or equivalent courses in Phonetics, and Biology 101, 102, 113, 114, 115H, or 116H.

Course description

This course pertains to structure and function of systems underlying human speech sound production and processing including respiratory, phonatory, and articulatory/resonance components. This course is designed to provide students with 1) basic anatomic/physiologic information concerning the respiratory, laryngeal, and supralaryngeal airway and 2) basic concepts and theories of the speech production mechanism. The course aims to generate practical interest in applying the anatomic and physiologic information to clinical populations.

Course learning outcomes

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

- understand the more detailed structure of the human skeletal system.
- understand the more detailed structure and function of the human muscular system.
- explain the detailed structure and functioning of the respiratory system for speech purposes.
- explain the detailed structure and functioning of the larynx for speech purposes.
- explain the detailed structure and functioning of the oropharyngeal and pharyngeal passages for speech purposes.
- describe the interconnections among physiologic, aerodynamic, and acoustic aspects of the speech production mechanism.

HOW THIS ONLINE COURSE WORKS

Mode of delivery: This course, including both lecture and recitation, is 100% online and asynchronous. There are no required sessions when you must be logged in to Carmen at a scheduled time.

Pace of online activities: This course is divided into **weekly modules** that are released at least one week ahead of time. In each weekly module, you will find lecture slides/video, recitation slides/video, and weekly recitation assignment (see course schedule). Students are expected to keep pace with weekly deadlines but may schedule their efforts freely within that time frame. I will gauge your weekly progress by asking each student to complete the discussion participation points. Details on the discussion participation points will be announced on Carmen, so make sure you review lecture content on a weekly basis. Quizzes and exams should be taken within the allotted time window (see tentative course schedule).

Credit hours and work expectations: This is a **3-credit-hour course**. According to Ohio State policy (go.osu.edu/credithours), students should expect around 3 hours per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 6 hours of homework (reading and assignment preparation, for example) to receive a grade of (C) average.

Participation requirements: The following is a summary of students' expected participation:

- **Participating in online activities: AT LEAST ONCE PER WEEK**
During most weeks you will probably log in many times. You are required to log in to the course in Carmen every week to participate in the Discussions. I will gauge your weekly progress by asking each student to complete the discussion participation points, which will be released on Carmen.
- **Office hours: OPTIONAL**
I plan to hold regular office hours via zoom on Tuesdays, 2 – 3 pm. Attending office hours are optional.

COURSE MATERIALS AND TECHNOLOGIES

Textbooks

Required

- Zemlin, W. R. (1998). *Speech and Hearing Science: Anatomy and Physiology* (4th ed.). Boston, MA: Allyn & Bacon.

Recommended/optional

- Netter, F.H. *Atlas of Human Anatomy*. East Hanover, NJ: Novartis. (latest edition).
- Raphael, L. J., Borden, G. J., & Harris, K. S. (2011). *Speech Science Primer: Physiology, Acoustics, and Perception of Speech* (6th ed.). Baltimore, MD: Lippincott Williams & Wilkins.
- *Netter Images* (<http://netterimages.com>) for accessing medical illustrations
- *W. R. Zemlin Memorial Website* (<http://zemlin.shs.uiuc.edu>) for accessing dissected cadaver pictures

Course technology

Technology support

For help with your password, university email, Carmen, or any other technology issues, questions, or requests, contact the Ohio State IT Service Desk. Standard support hours are available at ocio.osu.edu/help/hours, and support for urgent issues is available 24/7.

- **Self-Service and Chat support:** ocio.osu.edu/help
- **Phone:** 614-688-4357(HELP)
- **Email:** servicedesk@osu.edu
- **TDD:** 614-688-8743

Technology skills needed for this course

- Basic computer and web-browsing skills
- Navigating Carmen (go.osu.edu/canvasstudent)
- CarmenZoom virtual meetings (go.osu.edu/zoom-meetings)

Required equipment

- Computer: current Mac (MacOs) or PC (Windows 10) with high-speed internet connection
- Webcam: built-in or external webcam, fully installed and tested
- Microphone: built-in laptop or tablet mic or external microphone
- Other: a mobile device (smartphone or tablet) to use for BuckeyePass authentication

Required software

- Microsoft Office 365: All Ohio State students are now eligible for free Microsoft Office 365. Full instructions for downloading and installation can be found at go.osu.edu/office365help.

Carmen access

You will need to use BuckeyePass (buckeyepass.osu.edu) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you take the following steps:

- Register multiple devices in case something happens to your primary device. Visit the BuckeyePass - Adding a Device help article for step-by-step instructions (go.osu.edu/add-device).
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click **Enter a Passcode** and then click the **Text me new codes** button that appears. This will text you ten passcodes good for 365 days that can each be used once.
- Download the Duo Mobile application (go.osu.edu/install-duo) to all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at 614-688-4357(HELP) and IT support staff will work out a solution with you.

GRADING AND FACULTY RESPONSE

How your grade is calculated

ASSIGNMENT CATEGORY	POINTS
Exam 1	20%
Exam 2	20%

Exam 3	20%
Quizzes (Q1, Q2, Q3, Q4, and Q5)	20%
10 weekly recitation assignments	10%
Discussion participation points <ul style="list-style-type: none"> - There will be 3 discussion participation point activities for which each student will be required to submit their own response as well as to provide feedback to others' posts in order to receive full credit. 	10%
TOTAL	100%

**Schedule details are summarized in the tentative course schedule below.*

Descriptions of major course assignments

Exams and Quizzes

Description: Each exam will cover specific portions/topics of the course content, including information from lecture recordings, recitations, and assigned readings. The final exam will not be a cumulative exam. Allotted time set for each exam will be 80 minutes, meaning that you have 80 minutes total to complete each exam once you start it. Each exam will remain open for 18 hours, and you can take it at any time that works best for your schedule: Exam 1 (9/25, noon - 9/26, 11:59pm), Exam 2 (10/26, noon – 10/27, 11:59pm), and Final Exam (12/11, noon – 12/12, 11:59pm). Each quiz will mostly consist of labeling/identification questions. This is an opportunity for you to assess your level of understanding/learning progress. Each quiz will cover specific portions/topics of the course content. Allotted time for each quiz will be 5 minutes, meaning that you have 5 minutes total to complete each quiz once you start it. Each quiz will remain open for 12 hours, and you can take it at any time that works best for your schedule: Quiz 1 on 9/7 (noon-11:59pm), Quiz 2 on 9/21 (noon-11:59pm), Quiz 3 on 10/19 (noon-11:59pm), Quiz 4 on 11/16 (noon-11:59pm), and Quiz 5 on 12/5 (noon-11:59pm).

Academic integrity and collaboration: Exams and quizzes are part of formal assessment that each student must complete them independently without collaboration with other students or the use of outside materials. Proctoring software will be used for exams.

Weekly Recitation Assignments

Description: Weekly recitation assignments provide the students with independent review opportunities. You will be asked to solve a series of content-related questions. These assignments will be released on Thursdays on Carmen. Students will be required to complete and submit each assignment by the following Tuesdays, 3 pm.

Academic integrity and collaboration: Your recitation assignments should be your own original work. You are encouraged to collaborate with your classmates, sharing your thoughts and approaches. However, copying-pasting/reusing others' work will be strictly prohibited.

Discussion Participation Points

Description: Participating in discussions and online activities will be counted towards your final grade. Participation point opportunities and details on the required tasks will be announced on Carmen, so make sure you review lecture content and Carmen on a weekly basis. Exemplary activities include creating pseudo-exam questions related to the topic material, drawing schematic diagrams of various structures, including bony frameworks and muscles, labeling anatomic structures using unfamiliar figures, analyzing acoustic signals of speech, and summarizing organized thoughts on clinical scenarios. In order to receive credit, each student will be responsible for submitting their response by the designated deadline using Carmen Discussion. Three discussion participation points require you to submit your response as well as to provide feedback to other students' posts, which will be a great way to engage and interact with your classmates.

Academic integrity and collaboration: Your discussion participation points should be your own original work. You are encouraged to collaborate with your classmates, sharing your thoughts and approaches. However, copying-pasting/reusing others' work will be strictly prohibited.

Late assignments

Late submissions will not be accepted. Please refer to Carmen for due dates.

Grading scale

92.5–100: A	72.5–76.4: C
89.5–92.4: A-	69.5 –72.4: C-
86.5–89.4: B+	66.5 –69.4: D+
82.5–86.4: B	59.5 –66.4: D
79.5–82.4: B-	Below 59.4: E
76.5–79.4: C+	

Instructor feedback and response time

I am providing the following list to give you an idea of my intended availability throughout the course. (Remember that you can call **614-688-4357(HELP)** at any time if you have a technical problem.)

- **Grading and feedback:** For large weekly assignments, you can generally expect feedback within **7 days**.
- **Email:** I will reply to emails within **24 hours on days when class is in session at the university**.

OTHER COURSE POLICIES

Discussion and communication guidelines

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- **Email etiquette:** Include a subject line beginning with the course number (e.g., SHS4420 – recitation assignment question). This will help me orient which course your email is about. Let's keep our emails concise and professional with adequate salutations. You are leaving a written record via email – it is a reflection of you.
- **Writing style:** While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. A more conversational tone is fine for non-academic topics.
- **Tone and civility:** Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across online.
- **Citing your sources:** When we have academic discussions, please cite your sources to back up what you say. For the textbook or other course materials, list at least the title and page numbers. For online sources, include a link.
- **Backing up your work:** Consider composing your academic posts in a word processor, where you can save your work, and then copying into the Carmen discussion.

Academic integrity policy

See **Descriptions of major course assignments**, above, for my specific guidelines about collaboration and academic integrity in the context of this online class.

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

If I suspect that a student has committed academic misconduct in this course, I am obligated by university rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the university's *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the university.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- Committee on Academic Misconduct web page (go.osu.edu/coam)
- Ten Suggestions for Preserving Academic Integrity (go.osu.edu/ten-suggestions)

Student Services and Advising

University Student Services can be accessed through BuckeyeLink. More information is available here: <https://contactbuckeyelink.osu.edu/>

FOR UNDERGRAD COURSES: Advising resources for students are available here: <http://advising.osu.edu>

Copyright for instructional materials

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Statement on Title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator at titleix@osu.edu

Commitment to a diverse and inclusive learning environment

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

Land Acknowledgement

We would like to acknowledge the land that The Ohio State University occupies is the ancestral and contemporary territory of the Shawnee, Potawatomi, Delaware, Miami, Peoria,

Seneca, Wyandotte, Ojibwe and Cherokee peoples. Specifically, the university resides on land ceded in the 1795 Treaty of Greeneville and the forced removal of tribes through the Indian Removal Act of 1830. I/We want to honor the resiliency of these tribal nations and recognize the historical contexts that has and continues to affect the Indigenous peoples of this land.

More information on OSU's land acknowledgement can be found here:

<https://mcc.osu.edu/about-us/land-acknowledgement>

Your mental health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614-292-5766. CCS is located on the 4th floor of the Younkin Success Center and 10th floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at 614-292-5766 and 24 hour emergency help is also available 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Requesting accommodations

The university strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your

accommodations so that they may be implemented in a timely fashion. **SLDS contact information:** slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Accessibility of course technology

This online course requires use of CarmenCanvas (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.

- Canvas accessibility (go.osu.edu/canvas-accessibility)
- Streaming audio and video
- CarmenZoom accessibility (go.osu.edu/zoom-accessibility)
- Collaborative course tools

TENTATIVE COURSE SCHEDULE

Refer to the Carmen course for up-to-date assignment due dates.

Week	Dates	Topics, Readings, Assignments, Deadlines
1	Week of 8/21	Lecture: Introduction and Orientation: Speech Chain, Anatomical Terminology, and Elementary Tissues L1 and L2 (Zemlin Ch.1) Recitation: Introduction (no assignment)
2	Week of 8/28	Lecture: Muscle Tissue, Muscle Physiology, and Connection with the Nervous System L3 and L4 (Zemlin Ch.1) Recitation: Anatomical terminology (no assignment)
3	Week of 9/4	Lecture: Respiration: Boyle's Law, respiratory passage, lungs, bronchial tree, bony framework L5 and L6 (Zemlin Ch.2) Recitation: Respiration and respiratory framework (assignment #1 due) *Quiz 1 on 9/7 (noon-11:59pm)
4	Week of 9/11	Lecture: Respiration: inhalation and exhalation muscles L7 and L8 (Zemlin Ch.2) Aerodynamic Principles, and Research/Clinical Instruments) Recitation: Muscles of inspiration and expiration (assignment #2 due)
5	Week of 9/18	Lecture: Respiration: lung volumes and capacities, aerodynamic principles, respiratory measures L9 and L10 (Zemlin Ch.2)

Week	Dates	Topics, Readings, Assignments, Deadlines
		Recitation: Respiration review (assignment #3 due) *Quiz 2 on 9/21 (noon-11:59pm)
6	Week of 9/25	Exam 1 (9/25, noon - 9/26, 11:59pm)
7	Week of 10/2	Lecture: Phonation: laryngeal framework L11 (Zemlin Ch.3) Recitation: Laryngeal structures and membranes (assignment #4 due)
8	Week of 10/9 (10/12-10/13: autumn break)	Lecture: Phonation: vocal folds, intrinsic and extrinsic laryngeal muscles L12 and L13 (Zemlin Ch.3) Recitation: Laryngeal musculature (assignment #5 due)
9	Week of 10/16	Lecture: Phonation: phonatory physiology L14 and L15 (Zemlin Ch.3) Recitation: Laryngeal physiology (assignment #6 due) *Quiz 3 on 10/19 (noon-11:59pm)
10	Week of 10/23	Lecture: Phonatory: research tools for examining the laryngeal system and source-filter theory (source) L16 (Zemlin Ch.3) Recitation: Phonation and the source part review (assignment #7 due) Exam 2 (10/26, noon – 10/27, 11:59pm)
11	Week of 10/30	Lecture: Articulation and Resonance: supraglottic airway and cranial bones L17 and L18 (Zemlin Ch.4) Recitation: Supraglottic airway (no assignment)
12	Week of 11/6	Lecture: Articulation and Resonance: facial skeleton, teeth, occlusion types L19 (Zemlin Ch.4) Recitation: Bones of the skull and face, teeth (assignment #8 due)
13	Week of 11/13	Lecture: Articulation and Resonance: pharyngeal, palatal, mandibular, lingual, facial muscles L20, L21, and L22 (Zemlin Ch.4) Recitation: Supraglottic musculature *Quiz 4 on 11/16 (noon-11:59pm) (assignment #9 due)
14	Week of 11/20 (11/23-11/24: Thanksgiving)	
15	Week of 11/27	Lecture: Articulation and Resonance: articulatory activities, quantal theory, coarticulation, source-filter theory (filter) L23 (Zemlin Ch.4)

Week	Dates	Topics, Readings, Assignments, Deadlines
		Recitation: Mandibular, lingual, facial muscles (assignment #10 due)
16	Week of 12/4	Lecture: Articulation and Resonance: supralaryngeal measures L24 (Zemlin Ch.4) Recitation: General structure/musculature/physiology/filter part review *Quiz 5 on 12/5 (noon-11:59pm)
		FINAL EXAM: 12/11 (Monday), noon – 12/12 (Tuesday), 11:59pm

*Quiz dates: 9/7, 9/21, 10/19, 11/16, and 12/5



SHS 4420 SYLLABUS

Anatomy, Physiology, and Science of Speech

Autumn 2021

Class Schedule:

[Lecture]

Scott Lab E024

Tu/Th 11:10am-12:30pm

[Recitation]

Journalism Bldg 274

Mon 10:20-11:15am, 11:30am-12:25pm, or 12:40-1:35pm

COURSE OVERVIEW

Instructional team

Instructor: Dr. Youkyung Bae [jukjŋ be]

Email address: bae.180@osu.edu

Phone number: 614-688-4948

Office hours via zoom: Tuesdays 2:30-3:30pm (zoom link available on Carmen)

Teaching Assistant: Ms. Becca Alcorn

Email address: alcorn.45@osu.edu

Course description

This course pertains to structure and function of systems underlying human speech sound production and processing including respiratory, phonatory, and articulatory/resonance components. This course is designed to provide students with 1) basic anatomic/physiologic information concerning the respiratory, laryngeal, and supraglottal airway and 2) basic concepts and theories of the speech production mechanism. The course aims to generate practical interest in applying the anatomic and physiologic information to clinical populations. The prerequisite for this course includes SHS3320 (Principles of Phonetics), or equivalent courses in Phonetics, and Biology 101, 102, 113, 114, 115H, or 116H.

Course learning outcomes

Upon completion of this course, the student will be familiar with the following objectives:

1. the more detailed structure of the human skeletal system.
2. the more detailed structure and function of the human muscular system.
3. the detailed structure and functioning of the respiratory system for speech purposes.
4. the detailed structure and functioning of the larynx for speech purposes.
5. the detailed structure and functioning of the oropharyngeal and nasal passages for speech purposes.
6. the interconnections among physiologic, aerodynamic, and acoustic aspects of the speech production mechanism.

HEALTH AND SAFETY REQUIREMENTS

All students, faculty and staff are required to comply with and stay up to date on all university safety and health guidance (<http://safeandhealthy.osu.edu>). This guidance is subject to change based on guidance from the US Centers for Disease Control and Prevention, the Ohio Department of Health, and local health authorities. **Currently, all students, faculty, staff, and visitors to all Ohio State campuses are required to wear masks indoors, regardless of their vaccination status. The same policy applies to our lecture and recitation meetings. If a student does not wear a mask in class or wears it improperly, the instructor will ask the student to leave the classroom and not return if the student does not comply.**

HOW THIS COURSE WORKS

Mode of delivery: This course is 100% in-person. In-person class meetings are planned throughout the semester for both lecture and recitation. While attendance is not a required component, I will gauge your weekly progress by asking each of you to complete discussion participation activities. Detailed information on the participation activity will be announced during lecture and recitation sessions, so make sure you review lecture/recitation/Carmen content on a weekly basis. Specific schedules for the Quizzes and Exams are provided (see tentative course schedule listed at the end of the syllabus); quizzes and exams will be administered in class.

Credit hours and work expectations: This is a **3-credit-hour course**. According to [Ohio State policy](#), students should expect around 3 hours per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 6 hours of

homework (reading and assignment preparation, for example) to receive a grade of (C) average.

COURSE MATERIALS AND TECHNOLOGIES

Textbooks

REQUIRED BOOKS

Zemlin, W. R. (1998). *Speech and Hearing Science: Anatomy and Physiology* (4th ed.). Boston, MA: Allyn & Bacon.

REQUIRED SUPPLEMENTAL MATERIALS:

Netter Images (<http://netterimages.com>) for accessing medical illustrations.

W. R. Zemlin Memorial Website (<http://zemlin.shs.uiuc.edu>) for accessing dissected cadaver pictures.

Canvas (<https://carmen.osu.edu/>) for accessing lecture slides, recorded lectures, supplemental readings, diagrams, assignments, and discussions. You will need to use [BuckeyePass](#) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you take the following steps:

- Register multiple devices in case something happens to your primary device. Visit the [BuckeyePass - Adding a Device](#) help article for step-by-step instructions.
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click “Enter a Passcode” and then click the “Text me new codes” button that appears. This will text you ten passcodes good for 365 days that can each be used once.
- Download the [Duo Mobile application](#) to all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at 614-688-4357 (HELP) and the IT support staff will work out a solution with you.

RECOMMENDED READINGS/REFERENCES:

1. Netter, F.H. *Atlas of Human Anatomy*. East Hanover, NJ: Novartis. (any edition).
2. Raphael, L. J., Borden, G. J., & Harris, K. S. (2011). *Speech Science Primer: Physiology, Acoustics, and Perception of Speech* (6th ed.). Baltimore, MD: Lippincott Williams & Wilkins.

GRADING AND FACULTY RESPONSE

How your grade is calculated

ASSIGNMENT CATEGORY	POINTS
Exam 1	20%
Exam 2	20%
Exam 3	20%
Quizzes (Q1, Q2, Q3, Q4, and Q5)	20%
10 weekly recitation assignments	10%
Discussion participation points (lecture 5, recitation 5)	10%
TOTAL	100%

**Schedule details are summarized in the tentative course schedule below.*

Exams: Each exam will cover specific portions of the course content, including information from lectures, recitations, and assigned readings. The final exam will *not* be a cumulative exam.

Quizzes: Each quiz will mostly consist of labeling/identification questions. This is an opportunity for you to assess your level of understanding/learning progress prior to an exam. Each quiz will cover specific portions of the course content.

Weekly recitation assignments: Weekly recitation assignments provide students with independent review opportunities. You will be asked to solve a series of content-related questions. These assignments will be released and posted on Carmen on Thursdays. Students will be required to complete each assignment and submit a scanned copy/photocopy to Carmen by Mondays, 10am. Detailed instruction on assignment submission will be provided in your first recitation session (9/13).

Participation points: Participating in discussions and activities will be counted towards your final grade. Participation point opportunities and details on the required tasks will be announced during lecture and recitation sessions without prior notice, so make sure you review lecture/recitation/Carmen content on a weekly basis. Exemplary activities include creating pseudo-exam questions related to the topic material covered on a specific day, drawing schematic diagrams of various structures including muscles, labeling anatomic

structures using unfamiliar figures, analyzing acoustic signals of speech, and summarizing organized thoughts on clinical scenarios. In order to receive credit, each student will be responsible for submitting their own response by the designated deadline using Carmen Discussion.

Grading scale

92.5–100: A	72.5–76.4: C
89.5–92.4: A-	69.5 –72.4: C-
86.5–89.4: B+	66.5 –69.4: D+
82.5–86.4: B	59.5 –66.4: D
79.5–82.4: B-	Below 59.4: E
76.5–79.4: C+	

Faculty feedback and response time

I am providing the following list to give you an idea of my intended availability throughout the course. (Remember that you can call **614-688-HELP** at any time if you have a technical problem.)

- **Grading and feedback:** For weekly assignments, you can generally expect feedback within **7 days**.
- **Email:** I will reply to emails within **24 hours on days when class is in session at the university**.

OTHER COURSE POLICIES

Discussion and communication guidelines

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- **Email etiquette:** Include a subject line beginning with the course number (e.g., SHS4420 – recitation assignment question). This will help me orient which course your email is about. Let's keep our emails concise and professional with adequate salutations. You are leaving a written record via email – it is a reflection of you.
- **Writing style:** While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. A more conversational tone is fine for non-academic topics.

- **Tone and civility:** Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably.
- **Citing your sources:** When we have academic discussions, please cite your sources to back up what you say. (For the textbook or other course materials, list at least the title and page numbers. For online sources, include a link.)
- **Backing up your work:** Consider composing your academic posts in a word processor, where you can save your work, and then copying into the Carmen discussion.

Academic integrity policy

POLICIES FOR THE COURSE

- **Classroom policies:**
 - We maintain zero tolerance policies against harassment, bullying, and discrimination.
 - Every student is expected to maintain a professional disposition while in class and office hours. A lack of professionalism including (but not limited to) rudeness, talking while others are talking, having your cell phone on, obvious signs of disinterest, frequently leaving the classroom during class, immature behavior, disrespectful attitude, etc. may result in either a warning from the instructor or a lowered grade (up to 5%). During the university experience, it is expected that students are engaged in building professional skills as an integral part of their socialization into their career.
 - Students are responsible for demonstrating classroom courtesy at all times. This includes arriving at class on time and staying until the class is over. Students should be prepared for class and be attentive and courteous in the classroom. Courtesy also implies that differences in thoughts and ideas will be treated with respect and value. Relationships among students and between students and the instructor and the teaching assistant are expected to be mutually respectful and cordial.
- **Quizzes and exams:** You must complete the quizzes and exams yourself, without any external help or communication. Without sufficient communication, I may decline to give a makeup quiz or exam. A make-up quiz or exam will be considered only in the event of an excused absence with the instructor's prior approval; acceptable excuses include death, serious illness, court appearance, or family crisis/emergency. A family reunion, vacation, wedding, or educational workshop, etc. is not considered as an extreme emergency case.
- **Weekly assignments and participation points:** Your recitation assignments and participation points should be your own original work. You are encouraged to collaborate with your classmates, sharing your thoughts and approaches. However, reusing/copying-pasting others' work will be strictly prohibited.

OHIO STATE'S ACADEMIC INTEGRITY POLICY

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's [*Code of Student Conduct*](#), and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's *Code of Student Conduct* and this syllabus may constitute "Academic Misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University, or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's *Code of Student Conduct* is never considered an excuse for academic misconduct, so I recommend that you review the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University's *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- The Committee on Academic Misconduct web pages ([COAM Home](#))
- *Ten Suggestions for Preserving Academic Integrity* ([Ten Suggestions](#))
- *Eight Cardinal Rules of Academic Integrity* (www.northwestern.edu/uacc/8cards.htm)

Copyright disclaimer

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Statement on Title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

Your mental health

A recent American College Health Survey found stress, sleep problems, anxiety, depression, interpersonal concerns, death of a significant other, and alcohol use among the top ten health impediments to academic performance. Students experiencing personal problems or situational crises during the quarter are encouraged to contact Ohio State University Counseling and Consultation Service (614-292-5766; www.ccs.osu.edu) for assistance, support and advocacy. This service is free and confidential.

ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Accommodations

Students with disabilities (including mental health, chronic or temporary medical conditions) that have been certified by the Office of Student Life Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office of Student Life Disability Services is located in 098 Baker Hall, 113 W. 12th Avenue; telephone 614- 292-3307, slds@osu.edu; slds.osu.edu.

Requesting accommodations

If you would like to request academic accommodations based on the impact of a disability qualified under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, contact your instructor privately as soon as possible to discuss your specific needs. Discussions are confidential.

In addition to contacting the instructor, please contact the Student Life Disability Services at [614-292-3307](tel:614-292-3307) or ods@osu.edu to register for services and/or to coordinate any accommodations you might need in your courses at The Ohio State University.

Go to <http://ods.osu.edu> for more information.

Academic and Student Services offered on the OSU Main Campus

An overview of and contact information for student academic services offered on the OSU main campus can be found here <http://advising.osu.edu/welcome.shtml>

An overview of and contact information for student services offered on the OSU main campus can be found here <http://ssc.osu.edu>

TENTATIVE COURSE SCHEDULE

Week	Dates	Topics, Readings, Assignments, Deadlines
1	8/24, 8/26	Introduction and Orientation, Ch. 1 (Speech Chain, Anatomical Terminology, and Elementary Tissues)
2	8/31, 9/2	Respiration, Ch. 2 (Boyles Law, Respiratory Passage, Lungs, Bronchial Tree, Bony Framework, Respiratory Muscles, Lung Volumes, Capacities, Aerodynamic Principles, and Research/Clinical Instruments)
3	9/7, 9/9	
4	9/14*, 9/16	
5	9/21, 9/23	
6	9/28*, 9/30	Exam 1 on 9/30
7	10/5, 10/7	Phonation (Laryngeal Anatomy, Musculature, Phonatory Physiology, Body-Cover Theory, Myoelastic-Aerodynamic Theory, Source-Filter Theory (Source), Vocal Attributes, and Research/Clinical Instruments)
8	10/12	
9	10/19, 10/21	
10	10/26*, 10/28	Exam 2 on 10/28
11	11/2, 11/4	Articulation / Resonance (Supraglottic Airway, Cavities, Cranium, Facial Skeleton, Teeth, Occlusion Types, Pharyngeal/Palatal/Mandibular/Lingual/Facial Muscles, Articulatory Activities, Quantal Theory, Source-Filter Theory (Filter), Basic Acoustics, Coarticulation, and Research/Clinical Instruments)
12	11/9, 11/11	
13	11/16*, 11/18	
14	11/23	
15	11/30, 12/2	
16	12/7*	
FINAL EXAM: 12/13 (Monday), noon – 1:20 pm		

*Quiz dates: 9/14, 9/28, 10/26, 11/16, and 12/7

Distance Approval Cover Sheet

For Permanent DL/DH Approval | College of Arts and Sciences

Course Number and Title:

Carmen Use

When building your course, we recommend using the [ASC Distance Learning Course Template](#) for CarmenCanvas. For more on use of [Carmen: Common Sense Best Practices](#).

A Carmen site will be created for the course, including a syllabus and gradebook at minimum.

If no, why not?

Syllabus

Proposed syllabus uses the ASC distance learning syllabus template, includes boilerplate language where required, as well as a clear description of the technical and academic support services offered, and how learners can obtain them.

Syllabus is consistent and is easy to understand from the student perspective.

Syllabus includes a schedule with dates and/or a description of what constitutes the beginning and end of a week or module.

If there are required synchronous sessions, the syllabus clearly states when they will happen and how to access them.

Additional comments (optional):

Instructor Presence

For more on instructor presence: [About Online Instructor Presence](#).

Students should have opportunities for regular and substantive academic interactions with the course instructor. Some ways to achieve this objective:

Regular instructor communications with the class via announcements or weekly check-ins.

Instructional content, such as video, audio, or interactive lessons, that is visibly created or mediated by the instructor.



- Regular participation in class discussion, such as in Carmen discussions or synchronous sessions.
- Regular opportunities for students to receive personal instructor feedback on assignments.

Please comment on this dimension of the proposed course (or select/explain methods above):

Delivery Well-Suited to DL/DH Environment

Technology questions adapted from the [Quality Matters](#) rubric. For information about Ohio State learning technologies: [Toolsets](#).

- The tools used in the course support the learning outcomes and competencies.
- Course tools promote learner engagement and active learning.
- Technologies required in the course are current and readily obtainable.
- Links are provided to privacy policies for all external tools required in the course.

Additional technology comments (optional):

Which components of this course are planned for synchronous delivery and which for asynchronous delivery? (For DH, address what is planned for in-person meetings as well.)

If you believe further explanation would be helpful, please comment on how course activities have been adjusted for distance learning (optional):

Workload Estimation

For more information about calculating online instruction time: [ODEE Credit Hour Estimation](#).

- Course credit hours align with estimated average weekly time to complete the course successfully.
- Course includes direct (equivalent of “in-class”) and indirect (equivalent of “out-of-class”) instruction at a ratio of about 1:2.

Provide a brief outline of a typical course week, categorizing course activities and estimating the approximate time to complete them or participate:

- In the case of course delivery change requests, the course demonstrates comparable rigor in meeting course learning outcomes.

Accessibility

For more information or a further conversation, contact the [accessibility coordinator](#) for the College of Arts and Sciences. For tools and training on accessibility: [Digital Accessibility Services](#).

- Instructor(s) teaching the course will have taken Digital Accessibility training (starting in 2022) and will ensure all course materials and activities meet requirements for diverse learners, including alternate means of accessing course materials when appropriate.
- Information is provided about the accessibility of all technologies required in the course. All third-party tools (tools without campus-wide license agreements) have their accessibility statements included.

Description of any anticipated accommodation requests and how they have been/will be addressed.

Additional comments (optional):

Academic Integrity

For more information: [Academic Integrity](#).

- The course syllabus includes online-specific policies about academic integrity, including specific parameters for each major assignment:
- Assignments are designed to deter cheating and plagiarism and/or course technologies such as online proctoring or plagiarism check or other strategies are in place to deter cheating.

Additional comments (optional):

Frequent, Varied Assignments/Assessments

For more information: [Designing Assessments for Students](#).

Student success in online courses is maximized when there are frequent, varied learning activities.
Possible approaches:

- Opportunities for students to receive course information through a variety of different sources, including indirect sources, such as textbooks and lectures, and direct sources, such as scholarly resources and field observation.
- Variety of assignment formats to provide students with multiple means of demonstrating learning.
- Opportunities for students to apply course knowledge and skills to authentic, real-world tasks in assignments.

Comment briefly on the frequency and variety of assignment types and assessment approaches used in this course (or select methods above):

Community Building

For more information: [Student Interaction Online](#).

Students engage more fully in courses when they have an opportunity to interact with their peers and feel they are part of a community of learners. Possible approaches:

- Opportunities for students to interact academically with classmates through regular class discussion or group assignments.
- Opportunities for students to interact socially with classmates, such as through video conference sessions or a course Q&A forum.
- Attention is paid to other ways to minimize transactional distance (psychological and communicative gaps between students and their peers, instructor, course content, and institution).

Please comment on this dimension of the proposed course (or select methods above):

Transparency and Metacognitive Explanations

For more information: [Supporting Student Learning](#).

Students have successful, meaningful experiences when they understand how the components of a course connect together, when they have guidance on how to study, and when they are encouraged to take ownership of their learning. Possible approaches:

- Instructor explanations about the learning goals and overall design or organization of the course.
- Context or rationale to explain the purpose and relevance of major tasks and assignments.

- Guidance or resources for ancillary skills necessary to complete assignments, such as conducting library research or using technology tools.
- Opportunities for students to take ownership or leadership in their learning, such as by choosing topics of interest for an assignment or leading a group discussion or meeting.
- Opportunities for students to reflect on their learning process, including their goals, study strategies, and progress.
- Opportunities for students to provide feedback on the course.

Please comment on this dimension of the proposed course (or select methods above):

Additional Considerations

Comment on any other aspects of the online delivery not addressed above (optional):

Syllabus and cover sheet reviewed by *Jeremie Smith* on

Reviewer Comments:

Additional resources and examples can be found on [ASC's Office of Distance Education](#) website.

I have completed and signed off on the preliminary distance learning review for the **SHS 4420 Anatomy, Physiology, and Science of Speech** approval proposal (see signed Cover Sheet attached). This syllabus includes all required syllabus elements and provides an overview of the course expectations.

I have a few *recommendations* that I think will improve the course design, add clarity to the syllabus, and support a successful review by the faculty curriculum committee:

- Regarding the exams and quizzes, I recommend adding more detailed information about how these will be administered. Allocated times for these being posted in Carmen is mentioned in the syllabus but these allocated times (how long will quiz/exam be open and what time limits there are once the assessment has been started) should be clearly stated. Will proctoring software be used for the quizzes or exams?
- This being a fully asynchronous course, there are few opportunities for peer engagement/interaction. If the instructor hopes/expects there to be student responses to other students' posts in the discussion (this is mentioned in cover sheet but absent from syllabus), I recommend making this expectation for student interaction explicit and incentivize this by revising the grading plan for the assignment to specifically require student responses to others' posts.
- Two required syllabus elements were recently updated and approved by the College Faculty Curriculum committee, the **Statement on Disability Services & the Mental Health/CCS statement**. You can find both of these here: <https://ascas.osu.edu/curriculum/syllabus-elements>.

The ASC Office of Distance Education strives to be a valuable resource to instructors and departments in the College of Arts and Sciences. In addition to managing the [DL course review](#) process, [hosting ASC Teaching Forums](#), and developing an ever-expanding catalog of [instructor support resources](#), we also provide one-on-one instructional design consultation to ASC instructors interested in redesigning any aspect of their online course. If your department or any of your individual instructors wish to [meet with one of our instructional designers](#) to discuss how we can provide advice, assistance, and support, please do let me know.