

Term Information

Effective Term Spring 2023
[Previous Value](#) Autumn 2016

Course Change Information

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

Change of course delivery so that option of DL delivery is available.

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

The course maps well to DL delivery, and DL delivery during the covid campus closure was successful. Students in our major and outside of our major have a desire for more DL offerings, and the asynchronous delivery of the course material offers our advanced undergraduates good schedule flexibility.

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?)

We are currently working toward building a DL program pathway for our undergraduate BA degree. We have some DL offerings in our undergraduate program. However, we are currently well below the 50% credit threshold that would trigger the program becoming DL. When we move closer to that threshold, we will be submitting a proposal for DL program option.

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	Graduate, Undergraduate
Course Number/Catalog	5760
Course Title	Neurology of the Speech and Hearing Mechanism
Transcript Abbreviation	S-L-H Neurology
Course Description	The course is to provide you with a survey of the neurological components relevant to the professions of audiology and speech-language pathology. This will involve instruction on the nervous system at the cellular and tissue levels, the peripheral nervous system, the spinal cord, and the brain. Key structures involved in speech, language, and hearing will be discussed.
Previous Value	<i>Introduction to neuroanatomy and neuroscience for undergraduates in the Speech and Hearing Science major or those planning to apply for graduate school in speech-language pathology or audiology. The course includes discussion of the sensory and motor nervous systems at the cellular and system levels.</i>
Semester Credit Hours/Units	Fixed: 3

Offering Information

Length Of Course	14 Week
Previous Value	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
Previous Value	Less than 50% at a distance No

Grading Basis	Letter Grade
Repeatable	No
Course Components	Lecture
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: Biology 1101 or above.
<i>Previous Value</i>	<i>Prereq: Biology 1101 (101) or above.</i>
Exclusions	
<i>Previous Value</i>	Not open to students with credit for 765.
Electronically Enforced	No

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code	51.0201
Subsidy Level	Doctoral Course
Intended Rank	Senior, Masters, Doctoral

Requirement/Elective Designation

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes

- Students will have a basic understanding of the biology and physiology of the nervous system at the cellular level.
- Students will know the anatomical organization of the nervous system.
- Students will have basic understanding of how the brain functions to create body functions outside of the scope of communication.
- Students will have a strong understanding of the nervous system's roles in speech and hearing.
- Students will develop any understanding of how dysfunction of different nervous system structures underlie communication problems.
- *Describe the normal structure of the nervous system, particularly as it relates to Speech, Language, or Hearing/Balance*
- *Design and implement assessment and intervention programs appropriate to describe the normal functioning of the nervous system, particularly as it relates to Speech, Language, or Hearing/Balance*

Previous Value

Content Topic List

- Normal anatomy and physiology of the nervous system.
- Disorders of the nervous system as they related to speech and hearing.
- Normal structure and function of the nervous system, as it relates to speech, language, and swallowing
- Normal structure and function of the nervous system, as it relates to hearing/balance

Previous Value

- *Normal structure of the nervous system, as it relates to speech*
- *Normal structure of the nervous system, as it relates to language*
- *Normal structure of the nervous system, as it relates to hearing/balance*

Sought Concurrence

No

Attachments

- SHS 5760 Spring 2023 Syllabus DL.docx: DL version of syllabus
(Syllabus. Owner: Bielefeld, Eric Charles)
- SPHHRNG 5760 Spring 2022 Syllabus.docx: Current in-person syllabus
(Other Supporting Documentation. Owner: Bielefeld, Eric Charles)
- SPHHRNG 5760 DL cover sheet - signed ASC.pdf: Cover sheet from ASC ODE
(Other Supporting Documentation. Owner: Bielefeld, Eric Charles)
- SHS 5760 Spring 2023 Syllabus DL.docx: Revised DL syllabus
(Syllabus. Owner: Bielefeld, Eric Charles)

Comments

- Credit hours and work expectations has been updated to spell out more clearly how 3 hours of work per week will be met.

The synchronous sessions for the course are optional, and this is now stated more explicitly in the Student Participation Requirements.

For the recommendations: Proctorio has been removed from the course exams, the exams' open-book rules have been stated explicitly, and the fact that students' grades will not be affected by their participation in the synchronous sessions is not directly stated.

Thanks! *(by Bielefeld, Eric Charles on 02/23/2022 11:28 AM)*

- Please see Panel feedback e-mail sent to the department on 02/14/22. *(by Cody, Emily Kathryn on 02/14/2022 08:36 PM)*

COURSE CHANGE REQUEST
5760 - Status: PENDING

Last Updated: Vankeerbergen, Bernadette
Chantal
02/23/2022

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Bielefeld, Eric Charles	01/19/2022 11:17 AM	Submitted for Approval
Approved	Fox, Robert Allen	01/19/2022 01:08 PM	Unit Approval
Approved	Vankeerbergen, Bernadette Chantal	01/26/2022 10:46 AM	College Approval
Revision Requested	Cody, Emily Kathryn	02/14/2022 08:36 PM	ASCCAO Approval
Submitted	Bielefeld, Eric Charles	02/23/2022 11:29 AM	Submitted for Approval
Approved	Fox, Robert Allen	02/23/2022 12:22 PM	Unit Approval
Approved	Vankeerbergen, Bernadette Chantal	02/23/2022 01:31 PM	College Approval
Pending Approval	Cody, Emily Kathryn Jenkins, Mary Ellen Bigler Hanlin, Deborah Kay Hilty, Michael Vankeerbergen, Bernadette Chantal Steele, Rachel Lea	02/23/2022 01:31 PM	ASCCAO Approval



THE OHIO STATE UNIVERSITY

COLLEGE OF ARTS AND SCIENCES

SYLLABUS: SPHHRNG 5760
NEUROLOGY OF THE SPEECH AND HEARING
MECHANISM
SPRING 2023
3.0 CREDIT HOURS

Course overview

Instructor

Instructor: Eric Bielefeld

Email address: bielefeld.6@osu.edu

Phone number: 614-292-9436

Office hours: Mondays 3:00-4:00 via Zoom

Office Location: Zoom <https://osu.zoom.us/j/4801629009>

Class Meeting Schedule:

Element 1: Asynchronous Recorded lectures, posted on Mondays and Wednesdays by noon, EST.

Element 2: Weekly synchronous Zoom meeting Mondays 11:30 AM-12:30 PM

Course description

The course is to provide you with a survey of the neurological components relevant to the professions of audiology and speech-language pathology. This will involve instruction on the nervous system at the cellular and tissue levels, the peripheral nervous system, the spinal cord, and the brain. Key structures involved in speech, language, and hearing will be discussed. Neurological causes of communicative deficits will be discussed, along with treatments options aimed at the nervous system. This course is an upper elective course that partially fulfills the requirement of two upper elective courses for students majoring in Speech and Hearing Science.

Course management

The course will consist of asynchronous recorded lectures of roughly 60-70 minutes in duration. Most weeks will consist of two recordings posted, unless there is a holiday that week on the Monday or Wednesday. On Mondays at 11:30 AM, we will have a live Zoom meeting to expand upon the content included in the recorded lectures, and discuss any related materials or questions and answers. Those meetings will last for one hour per week, and attendance is optional. Summative assessment will consist of weekly quizzes and exams.

Course learning outcomes

- 1) Students will have a basic understanding of the biology and physiology of the nervous system at the cellular level.
 - Student Learning Outcomes:
 - a. Students will be able to describe the structure of the neuron soma and neurites.
 - b. Students will be able to explain the process of neuron-to-neuron communication through the action potential.
 - c. Students will be able to articulate how the supporting cells of nervous contribute to function.
 - d. Students will be able to contrast specialized receptor and effector cells' functions with those of the neuron.
- 2) Students will know the anatomical organization of the nervous system.
 - Student Learning Outcomes:
 - a. Students will be able to list the names, numbers, and functions of the 12 cranial nerves.
 - b. Students will be able to describe how the spinal cord is organized and connected to the brain and peripheral nervous system.
 - c. Students will be able to describe the organization of the brain from brainstem to cortex.
 - d. Students will be able to discuss how different imaging and evoked potentials tests contribute to the understanding of nervous system anatomy.
- 3) Students will have basic understanding of how the brain functions to create body functions outside of the scope of communication.
 - Student Learning Outcomes:
 - a. Students will be able to define the sympathetic nervous system.
 - b. Students will be able to describe how touch sensation is processed in the nervous system.
 - c. Students will be able to identify the key pathway for processing of visual information.
 - d. Students will be able to describe how the nervous system processes taste and smell.
 - e. Students will be able to define models for emotion processing.

- f. Students will be able to describe current models for memory.
- 4) Students will have a strong understanding of the nervous system's roles in speech and hearing.

Student Learning Outcomes

- a. Students will be able to describe the auditory transduction pathways.
- b. Students will be able to define the key structures involved in swallowing.
- c. Students will be able to articulate the central nervous system pathways involved in language.
- d. Students will be able to describe vestibular/balance transduction.
- e. Students will be able to write out the pathways in the speech system.
- 5) Students will develop any understanding of how dysfunction of different nervous system structures underlie communication problems.

Student Learning Outcomes

- a. Students will be able to describe how auditory injuries cause hearing loss.
- b. Students will be able to list the common sites of injury in dysphagia.
- c. Students will be able to define the most common types of aphasias.
- d. Students will be able to describe the sites of lesion in speech dysfunction.
- e. Students will be able to articulate types and symptoms of mental health disorders.

How this Online course works

Mode of delivery: This course is 100% online. There will be a mix of asynchronous recorded lectures and synchronous sessions when you must be logged in to Carmen at a scheduled time (Mondays 11:30-12:20).

Pace of online activities: This course is divided into **weekly modules** that are released one week ahead of time. Students are expected to keep pace with weekly deadlines but may schedule their efforts freely within that time frame. Students are encouraged to work at a pace that best fits their learning and schedule while completing assignments as directed on the syllabus. Students are responsible for communicating any questions or concerns about the material presented in a timely manner.

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. The three hours of direct instruction will consist of 50 minutes of synchronous meeting per week, 20 minutes for quiz completion, and 1 hour, 50 minutes of asynchronous recorded lectures per week.

Student participation requirements

Because this is a distance-education course, your attendance is based on your online activity and participation. The following is a summary of everyone's expected participation:

- **Logging in: AT LEAST ONCE PER WEEK**
Be sure you are logging in to the course in Carmen each week, including weeks with holidays or weeks with minimal online course activity. (During most weeks you will probably log in many times.) If you have a situation that might cause you to miss an entire week of class, discuss it with me *as soon as possible*.
- **Office hours and live sessions: OPTIONAL OR FLEXIBLE**
All live, scheduled events for the course, including my office hours, are optional. That said, the Zoom synchronous meetings will introduce the clinical applications of the material from the asynchronous lectures. Therefore, attendance and participation are encouraged for all students. However, failure to attend/participate will not have a negative effect on your grade. I will provide a recording that you can watch later, but live participation is encouraged and will provide you with the best learning experience in the course.

Course materials

Required

Bear, M.F., Connors, B.W., Paradiso, M.A. (2016) Neuroscience – Exploring the Brain (4th Ed). Wolters Kluwer. ISBN: 978-0-7817-6.

Course technology

For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at <https://ocio.osu.edu/help/hours>, and support for urgent issues is available 24x7.

- **Self-Service and Chat support:** <http://ocio.osu.edu/selfservice>
- **Phone:** 614-688-HELP (4357)
- **Email:** 8help@osu.edu
- **TDD:** 614-688-8743

Baseline technical skills necessary for online courses

- Basic computer and web-browsing skills
- Navigating Carmen

Technology skills necessary for this specific course

- CarmenZoom audio and video chat
- Playing a slide presentation with audio narration

Necessary equipment

- Computer: current Mac (OS X) or PC (Windows 7+) with high-speed internet connection
- Webcam: built-in or external webcam, fully installed
- Microphone: built-in laptop or tablet mic or external microphone

Necessary software

- [Microsoft Office 365 ProPlus](#) All Ohio State students are now eligible for free Microsoft Office 365 ProPlus through Microsoft's Student Advantage program. Each student can install Office on five PCs or Macs, five tablets (Windows, iPad® and Android™) and five phones.
 - Students are able to access Word, Excel, PowerPoint, Outlook and other programs, depending on platform. Users will also receive 1 TB of OneDrive for Business storage.
 - Office 365 is installed within your BuckeyeMail account. Full instructions for downloading and installation can be found <https://ocio.osu.edu/kb04733>.

Grading and faculty response

Grades

Assignment or category	Points
10 Weekly Quizzes	10 pts each =100 points
Midterm 1	100 pts
Midterm 2	100 pts
Final exam	100 pts
Total	400 points

See course schedule, below, for due dates

Assignment information

Description of the quizzes: Weekly quizzes on Carmen will be conducted in all weeks except those with a midterm exam scheduled. They will be held on Wednesdays during the week, and will consist of 5-10 questions on the topics of the previous two lectures. Students will have 20 minutes to complete each quiz.

Academic integrity and collaboration: You must complete the quizzes yourself, but you are free to access resources (notes, textbook) to help you produce your answers.

Description of the exams: The three exams (two mid-terms and a final) will consist of a mix of multiple choice and short answer questions, and will be timed to 90 minutes per exam.

Academic integrity and collaboration: You must complete the exams yourself, without any external help or communication with other students. The exams are not open-book/open-note, and no external materials should be used to assist you with your answers.

For the quizzes and exams, students will have a 12-hour window 9:00 AM to 9:00 PM in which to complete the quiz or exam. Once the quiz/exam is started, it will be timed to the 20- or 90-minute time limit.

Late assignments

Absence and Makeup Policy: Quizzes and exams are due by 9:00 PM on the listed due date, and no late submissions will be accepted without appropriate explanation and documentation. Any medical or other reasons for late assignments must be approved by the instructor prior to the Quiz/Exam.

Grading scale

93–100: A
90–92.9: A-
87–89.9: B+
83–86.9: B
80–82.9: B-
77–79.9: C+
73–76.9: C
70–72.9: C-
67–69.9: D+
60–66.9: D
Below 60: E

Faculty feedback and response time

Email Response: The instructor will email you back within 8 hours during the week, and within 24 hours on weekends/holidays.

Graded Materials Return: Quizzes will be graded by the end of the submission date. Exams will be scored and grades reported within 7 days after the Exam date.

Other course policies

Student academic services

Student academic services offered on the OSU main campus
<http://advising.osu.edu/welcome.shtml>.

Student support services

Student support services offered on the OSU main campus <http://ssc.osu.edu>.

Academic integrity policy

Policies for this online course

- **Quizzes and exams:** You must complete the midterm and final exams yourself, without any external help or communication. Quizzes are not permitted to use student collaboration, but the student is free to utilize resources from the course (notes, textbook) to answer quiz questions.
- **Reusing past work:** In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build on past research or revisit a topic you've explored in previous courses, please discuss the situation with me.

Ohio State's academic integrity policy:

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/>.

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.

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)

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

Accessibility accommodations for students with disabilities

The University strives to make all learning experiences as accessible as possible. 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 Carmen (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.

- [Carmen \(Canvas\) accessibility](#)
- Streaming audio and video
- Synchronous course tools

Mental health statement

As a student you may experience a range of issues that can cause barriers to learn, 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. No matter where you are engaged in distance learning, The Ohio State University's Student Life Counseling and Consultation Service (CCS) is here to support you. If you find yourself feeling isolated, anxious or overwhelmed, on-demand resources are available at go.osu.edu/ccsondemand. You can reach an on-call counselor when CCS is closed at 614- 292-5766, and 24-hour emergency help is also available through the 24/7 National Prevention Hotline at 1-800-273-TALK or at suicidepreventionlifeline.org. The Ohio State Wellness app is also a great resource available at go.osu.edu/wellnessapp.

Statement on Diversity

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.

Course schedule

<u>Module #</u>	<u>Posting Date</u>	<u>Topic</u>	<u>Readings</u>	<u>Learning Outcomes</u>
1	1/11	Course intro; Neurology in speech, language, and hearing Zoom meeting 1		
2	1/13	The Neuron Part 1: structure and function	Chapter 2	1a; 5a
	1/18	No class: Martin Luther King, Jr. Day		
3	1/20	Quiz 1 on Classes 1 and 2 The Neuron Part 2: The action potential	Chapters 3-5	1b
4	1/25	The Neuron Part 3: The action potential – Continued Zoom meeting 2	Chapters 3-5	1b; 5a
5	1/27	Glial cells; Receptors and Effectors	Chapter 2	1c; 1d; 5a; 5d

		Quiz 2 on Class 3		
6	2/1	The peripheral nervous system and cranial nerves Zoom meeting 3	Chapter 7	2a; 5a; 5d
7	2/3	Spinal cord Quiz 3 on Classes 4 and 5	Chapter 7	2b; 5d
8	2/8	The brainstem, midbrain, reticular Formation Zoom meeting 4	Chapter 19	2c
9	2/10	Hypothalamus and Autonomic nervous system Quiz 4 on Classes 6 and 7	Chapters 15-16	3a
10	2/15	Techniques for studying the nervous System Zoom meeting 5	Chapter 19	2d
11	2/17	Exam 1 – will cover classes 1-9		
12	2/22	Overview of the cerebrum Zoom meeting 6	Chapter 7	2c; 5a
13	2/24	Fluid supplies to nervous system Quiz 5 on Class 10 (available 2/22-2/25)	Chapter 7	2c; 5a
14	3/1	Taste and Smell Zoom meeting 7	Chapter 8	3d; 5b
15	3/3	The Visual System Quiz 6 on Classes 12 and 13	Chapter 9-10	3c
16	3/8	Somatosensory system Zoom meeting 8	Chapter 12	3b
17	3/10	Memory Quiz 7 on Classes 14 and 15	Chapter 24	3f; 5d
18	3/15	Emotions Zoom meeting 9	Chapter 18	3e; 5a; 5d
19	3/17	Exam 2 – will cover units 10, 11-17		

20	3/22	Movement Zoom meeting 10	Chapter 14	1d; 4b; 4d; 4e
21	3/24	Mental Disorders No quiz this week	Chapter 22	5e
22	3/29	The auditory nervous system Zoom meeting 11 Quiz 8 on Classes 20 and 21 (available 3/29-4/2)	Chapter 11	1d; 4a; 5a
	3/31	No class – Spring Break day		
23	4/5	Vestibular nervous system Zoom meeting 12	Chapter 11	1d; 4d
24	4/7	Nervous system for language Quiz 9 on Class 22 and 23	Chapter 20	4c; 5c
25	4/12	Nervous system for speech Zoom meeting 13		1d; 4e; 5d
26	4/14	Nervous system for swallowing Quiz 10 on Classes 24 and 25		2a; 4b; 4b
27	4/19	Plasticity and aging Zoom meeting 14	Chapter 23	1a; 1b; 3f
28	4/21	Bonus Zoom meeting to prep for Final Exam – time TBD		
Finals week	4/27	Final exam covering topics 18, 20- 27		



Instructor: Eric Bielefeld

Department of Speech and Hearing Science
104C Pressey Hall
614-292-9436
Email: bielefeld.6@osu.edu

Class Meeting Schedule:

Element 1: Class meetings on Tuesdays and Thursdays 5:30 PM to 6:50 PM in E004 Scott Lab.
Element 2: Office hours Mondays 3:00-4:00 PM in 104C Pressey Hall.

Course Description:

The course is to provide you with a survey of the neurological components relevant to the professions of audiology and speech-language pathology. This will involve instruction on the nervous system at the cellular and tissue levels, the peripheral nervous system, the spinal cord, and the brain. Key structures involved in speech, language, and hearing will be discussed. Neurological causes of communicative deficits will be discussed, along with treatments options aimed at the nervous system. This course is an upper elective course that partially fulfills the requirement of two upper elective courses for students majoring in Speech and Hearing Science.

Prerequisites: Biology 1101 or above

Course Learning Outcomes:

- 1) Students will have a basic understanding of the biology and physiology of the nervous system at the cellular level.
Student Learning Outcomes:
 - a. Students will be able to describe the structure of the neuron soma and neurites.
 - b. Students will be able to explain the process of neuron-to-neuron communication through the action potential.
 - c. Students will be able to articulate how the supporting cells of nervous contribute to function.
 - d. Students will be able to contrast specialized receptor and effector cells' functions with those of the neuron.
- 2) Students will know the anatomical organization of the nervous system.
Student Learning Outcomes:
 - a. Students will be able to list the names, numbers, and functions of the 12 cranial nerves.
 - b. Students will be able to describe how the spinal cord is organized and connected to the brain and peripheral nervous system.
 - c. Students will be able to describe the organization of the brain from brainstem to cortex.
 - d. Students will be able to discuss how different imaging and evoked potentials tests contribute to the understanding of nervous system anatomy.

- 3) Students will have basic understanding of how the brain functions to create body functions outside of the scope of communication.

Student Learning Outcomes:

- a. Students will be able to define the sympathetic nervous system.
- b. Students will be able to describe how touch sensation is processed in the nervous system.
- c. Students will be able to identify the key pathway for processing of visual information.
- d. Students will be able to describe how the nervous system processes taste and smell.
- e. Students will be able to define models for emotion processing.
- f. Students will be able to describe current models for memory.

- 4) Students will have a strong understanding of the nervous system's roles in speech and hearing.

Student Learning Outcomes

- a. Students will be able to describe the auditory transduction pathways.
- b. Students will be able to define the key structures involved in swallowing.
- c. Students will be able to articulate the central nervous system pathways involved in language.
- d. Students will be able to describe vestibular/balance transduction.
- e. Students will be able to write out the pathways in the speech system.

- 5) Students will develop any understanding of how dysfunction of different nervous system structures underlie communication problems.

Student Learning Outcomes

- a. Students will be able to describe how auditory injuries cause hearing loss.
- b. Students will be able to list the common sites of injury in dysphagia.
- c. Students will be able to define the most common types of aphasia.
- d. Students will be able to describe the sites of lesion in speech dysfunction.
- e. Students will be able to articulate types and symptoms of mental health disorders.

Course Materials / Software:

Required: Bear, M.F., Connors, B.W., Paradiso, M.A. (2016) Neuroscience – Exploring the Brain (4th Ed). Wolters Kluwer. ISBN: 978-0-7817-6.

Grading and Evaluation:

Descriptions for each assignment or category of assignments

Assignment Name	Points / Weight	Course Grading Scheme	
Exam 1	33.333%	A	93-100%
Exam 2	33.333%	A-	90-92%
Exam 3	33.333%	B+	87-89%
		B	83-86%
		B-	80-82%
		C+	77-79%
		C	73-76%
		C-	70-72%
		D+	67-69%
		D	63-66%
TOTAL COURSE POINTS	100%	E	0-62%

Attendance / Participation Expectations: Attendance at weekly class meetings or office hours will not be recorded, and is therefore at the discretion of the student.

Absence and Makeup Policy: Exams will be held during class on the listed date, and no late scheduling will be accepted without appropriate explanation and documentation. Any medical or other reasons for late assignments must be approved by the instructor prior to the Exam.

Instructor Feedback and Response Expectations:

Email Response: The instructor will email you back within 8 hours during the week, and within 24 hours on weekends/holidays.

Graded Materials Return: Exams will be scored and grades reported within 7 days after the Exam date.

Course Schedule

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4	1/20	The Neuron Part 3: The action potential continued	Chapters 3-5	1b; 5a
5	1/25	Glial cells; Receptors and Effectors	Chapter 2	1c; 1d; 5a; 5d
6	1/27	The peripheral nervous system and cranial nerves	Chapter 7	2a; 5a; 5d
7	2/1	Spinal cord	Chapter 7	2b; 5d
8	2/3	The brainstem, midbrain, reticular Formation	Chapter 19	2c
9	2/8	Hypothalamus and Autonomic nervous system	Chapters 15-16	3a
10	2/10	Exam 1 – will cover units 1-9		
11	2/15	Techniques for studying the nervous System	Chapter 19	2d
12	2/17	Overview of the cerebrum	Chapter 7	2c; 5a
13	2/22	Fluid supplies to nervous system	Chapter 7	2c; 5a
14	2/24	Taste and Smell	Chapter 8	3d; 5b
15	3/1	The Visual System	Chapter 9-10	3c
16	3/3	Somatosensory system	Chapter 12	3b
17	3/8	Memory	Chapter 24	3f; 5d
18	3/10	Emotions	Chapter 18	3e; 5a; 5d
	3/15 & 3/17	No class- Spring Break		
19	3/22	Movement	Chapter 14	1d; 4b; 4d; 4e
20	3/24	Exam 2 – will cover units 11-18		

21	3/29	Mental disorders	Chapter 22	5e
22	3/31	The auditory nervous system	Chapter 11	1d; 4a; 5a
23	4/5	Vestibular nervous system	Chapter 11	1d; 4d
24	4/7	Nervous system for speech		1d; 4e; 5d
25	4/12	Nervous system locations involved in swallowing *Asynchronous recorded lecture on Mediasite		
26	4/14	Nervous system for language		2a; 4b; 4b
27	4/19	Nervous system plasticity and senescence	Chapter 20	4c; 5c
28	4/21	Review for Final Exam	Chapter 23	1a; 1b; 3f
Finals week	4/29 8:00-9:45 PM	Exam 3 – will cover units 19, 21-28		

University Policies

Disability 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

Statement on Diversity

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.

Statement on 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 are or someone you know is 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.

If you are thinking of harming yourself or need a safe, non-judgmental place to talk, or if you are worried about someone else and need advice about what to do, 24 hour emergency help is also available through the Suicide Prevention Hotline (Columbus: 614-221-5445 / National: 800-273-8255); or text (4hope to 741741); or at suicidepreventionlifeline.org

Academic Misconduct

Academic misconduct is a violation of the code of student conduct and is required to be reported to the Committee on Academic Misconduct (faculty rule 3335-31-02). Academic misconduct is defined by the University as any activity that compromises the academic integrity of the university or subverts the educational process. Examples include but are not limited to: plagiarism, cheating on examinations, violation of course rules outlined in this syllabus. Consult student handbook for further information. Any student caught cheating or giving assistance to another student on an exam will automatically receive a zero for that exam.

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.