

PSU SPEECH AND HEARING SCIENCES
Neurology of Speech and Hearing
SPHR 461
Fully Online, 4 Credits
2022 SUMMER

Instructor: Barnali Mazumdar

Office and Office Hours: Online, by appointment

Instructor Email: barnali@pdx.edu

Weekly Interaction Session: Thursday 2.00-3.00 p.m.

Zoom Link: <https://pdx.zoom.us/j/4412134787>

COURSE DESCRIPTION AND GOALS: This course explores how the nervous system connects to communication. It will include an overview of how neurons communicate with each other to how they form networks that carry out the complex behaviors involved with speech, hearing and swallowing. Topics will include chemical and electrical transmission, the structure and function of the nervous system, innervation of muscles involved in speech, hearing and swallowing, the central auditory system, and brain regions that participate in the comprehension and production of speech and language.

LEARNER OUTCOMES: Upon successful completion of this course, learners should be able to:

1. Identify and label the anatomical structures involved with neuroanatomy.
2. Describe the processes involved with innervation and communication from the brain to muscles, specifically involved with speech, language, hearing and swallowing.
3. Apply newly acquired knowledge of neurology to typical and disordered communication systems.

These learning objectives address Standard IV-B:

“The applicant must have demonstrated knowledge of basic human communication and swallowing processes, including the appropriate ... neurological... psychological... developmental... bases. The applicant must have demonstrated the ability to integrate information pertaining to normal and abnormal human development across the life span.”

REQUIRED TEXTS AND MATERIALS

Required: *An Introduction to the Neurology of Communication & Swallowing*, by Dr. Sarah Key-DeLyria.

Publisher: Great River Learning Technologies, ISBN: 9781680758092

**Use the following link to purchase the required textbook

<https://www.grlcontent.com/>

Optional: *Atlas of Neuroanatomy for Communication Science and Disorders*, by L. L. LaPointe. Thieme, 2011. ISBN: 978-1604066494

- **Access to the following platforms and technology:** CANVAS, Zoom, email/google calendar, video or audio recording methods depending on assignment choices, scan or photo-taking capabilities for drawing or construction assignments
- **Required:** Colored Pencils and/or colored markers (at least 12 colors, any brand)

- **Required:** Household objects (fruit? Legos? Twigs? Yarn?) that you can use to model brain anatomy and neurons. Or, you can purchase play dough or clay, pipe cleaners, etc.
- **Optional:** Light-colored, close-fitting rubber or silicon swim cap (can get from Student Rec Center or bookstore has/can order)
- **Optional:** Black Sharpie for the swim cap (other colors are also helpful)
- **Required:** Human BioDigital account (FREE!)
- **Additional readings, class handouts, and web resources will be available for online access and use through the CANVAS course site.**

EXPECTATIONS AND CLASS POLICIES: The nature of the course requires learning a variety of neuroanatomical structures and their related functions. Instructional methods focus on meeting the course objectives (especially the verbs!): **identify & label** structures, **describe** processes and **apply** your knowledge. These objectives are integrated throughout the course. To support your learning, the course includes short video lectures, reading material, quizzes, in-chapter assignments, learning labs and ‘experiences’, and discussion boards. The focus is on your practice and demonstration of identification, labeling, description, and application to facilitate your use of this knowledge in future coursework and practice.

The course will employ ***Pre-Chapter Quizzes, In-Chapter Assignments, Post-Chapter Quizzes, Weekly Learning Labs, Weekly Discussion Board Posts + Replies, and Learning Experiences***

Pre-Chapter Quizzes (2 points each: 20 points total)

Each chapter of the textbook starts with a pre-quiz and has learning checks throughout. They are meant to reinforce your learning as you read the material. The pre-quizzes will be graded for completion, not accuracy. That is, you will get credit if you attempt to answer all questions.

In-Chapter Assignments (2 points each: 20 points total)

Each chapter has several prompts and learning checks throughout. You will receive full credit for the in-chapter assignments if you fully answer each prompt. There are additional, longer learning activities listed at the end of the chapters (‘Follow Your Curiosity’ or ‘Further Learning’). Those are **not** required!

Post-Chapter Quizzes (5 points each: 50 points total)

Each chapter ends with a multiple-choice or fill-in-the-blank quiz. These quizzes will be graded for accuracy and are also meant to reinforce your comprehension of the reading material and prepare you for in-class activities and discussions.

Weekly Learning Labs (8 points each: 64 points total)

Learning about neuroanatomy and physiology requires learners to visualize and label 3-D body structures. To assist with meeting the course objectives to label and identify this visual and kinesthetic information, learners will complete drawing, construction, labeling, and other assignments throughout the term. A variety of methods are included to promote a variety of learning styles. These labs are posted each week on the CANVAS course site. The Human BioDigital site or the book, Atlas of Neuroanatomy are useful resources for completing these assignments, as well as course tutorials, lectures, and outlines.

Labs are designed to avoid relying on short-term memorization of material to more lasting learning. If you earn lower than 6 on these Learning Labs, you can revise your assignment within 1 week of receiving your grade except for the last week of class. Your assignment will be regraded for a potentially higher (but not lower) grade. All assignments and revisions must be submitted before August 13th at 11:59pm.

Weekly Discussion Board (4 points each: 32 points total)

In addition to learning to label and identify neuroanatomical structures, you need to start applying this knowledge to understanding language, cognition, brain injury, motor speech, dysarthria, and other systems and impairments that are important in the speech and hearing sciences. In order to meet this learning objective, weekly discussion boards will ask you to consider an applied topic, post your response to a prompt, and post your thoughtful replies to at least 2 different posts.

Your response will be graded based on the following criteria: 1) responsiveness to the discussion prompt; 2) thoroughness/adequacy of response; 3) clarity of expression; 4) response(s) to your colleagues' posts. Discussions are a way for you to practice application of knowledge during conversation, which is a primary way you will be expected to use your new knowledge in future courses and practice. Discussions and conversation that is not just surface also allows you to explore new ideas and viewpoints based on your readings, content searches, and classmates' ideas. All prompts are posted each week on Monday at 12:00 a.m. All responses are due by Sunday at 11:59 p.m. except for the final week. For final week, all discussion posts must be submitted by August 13th at 11:59 p.m.

Learning Experience (14 points total)

Learning experience is a way to connect your own interests to the course material. This is the primary way that humans learn: making connections. Think about your own interests and things that excite you and find a unique way to connect those interests to the course. If you aren't sure where to start, explore a book or listen to a podcast and see where that takes you!

Pick 1 option from below. You must turn in your learning experience by the end of Week 4. Note the specific requirements for this activity. **All** require a 1-2 page, **single spaced** summary posted on the Learning Experience assignment drop box, and some require a video or voice-over slide presentation of your experience or creation that must be posted on the drop box by the deadline.

- 1. Find and read an interesting published popular book relevant to neurology. Turn in** a 1-2 page summary with a reflection of your thoughts about the book.
- 2. Find and read a peer-reviewed research article relevant to neurology. Turn in** a 1-2 page summary with your reflection of your thoughts about the article. Please confirm that the article is peer-reviewed with your instructor before completing this option.
- 3. Be a skeptic or critical consumer! Did you find an interesting article on a website, magazine, or other periodical about the brain or brain injury?** Find the peer-reviewed source of their information that confirms or refutes their claims. If you can't find a citation in the popular article, do a search on scholar.google.com and see if you can find something to back up or dismiss their claims. **Turn in** a 1-2 page summary of how well the original source matches the research findings.
- 4. Interview someone who does research relevant to neurology** (not your instructor! 😊). This can be a faculty person, adjunct or graduate student. Please approach someone for an interview in a

professional way. Someone will need to donate their time for your learning! **Turn in** a written 1-2 page summary of your conversation and your reflections about it.

5. **Create a piece of art that reflects an issue, idea, or concept relevant to neurology.** Art can be many things: photography, painting, video, drawing, music, sculpture, and more. The quality of the art and the **presentation** of the art is part of your grade for this choice. Your art piece should not replicate any lab assignments but be your own, original idea. You will need to post either a video of yourself describing your art or a voiceover slideshow of your art piece.

EXPECTATIONS and ASSESSMENT: Your final grade will be based on your participation/performance on the following:

1. Ten (10) Pre-chapter quizzes (20 points);
2. Ten (10) In-chapter quizzes (20 points);
3. Ten (10) Post-chapter quizzes (50 points total points possible);
4. Eight (8) Weekly learning labs (64 points total points possible);
5. Eight (8) Discussion Responses (32 total points possible);
6. One (1) Learning experience (14 total points possible)

The final grade will be calculated from the total points earned in the class (possible 200 points total).

GRADING

Assessment of Learning

Best Practice/ Proficient	Adequate	Developing	Undeveloped	Inferior
A: 200-186.0	B+: 179.9-174	C+: 159.9-154	D+: 145.9-134	F: 119.9 or below
A-: 185.9-180	B: 173.9-166	C: 153.9-146	D: 133.9-126	
	B-: 165.9-160		D-: 125.9-120	

Late assignments are accepted within 1 week of the due date for reduced credit **except for the final week. All late work will be deducted by .5 points for each calendar day that it is late, starting immediately following the due date. All assignments must be submitted by August 13th at 11:59 p.m. No assignments will be accepted after this date due to grading deadlines.*

**Superior work on assignments may earn extra points. Some assignments have alternative versions that may provide additional credit.*

I welcome your feedback regarding the course and any questions, comments or concerns you may have. If at any time you feel you need extra assistance, please arrange to meet with me, as timely communication is essential. Your final grade will reflect *your performance* in class; thus, you are responsible for the outcome – but I am here to assist you in any way I can.

Weekly Interaction Session: The instructor will host 1 weekly 1-hour Question and Answer session [on Zoom](#) that is optional, but highly encouraged! Please try to attend when you can. These meetings are your best opportunity to ask questions and discuss course material, labs, and discussion board prompts with your instructor and peers. They will be recorded so that those not able to attend are able to review what was discussed. If you have a question that is about your individual grade or performance, please

set up an individual meeting with the instructor rather than take time away from these sessions. *Session times will be every Thursday 2.00-3.00 p.m.*

[Fall 2020 Student FAQs for Pass/No Pass Grading](#). To acknowledge the unique nature of the Fall 2020 term and better support our students, PSU has enacted a temporary policy change to allow expanded use of Pass/No-Pass (P/NP) grading. Consistent across SPHR classes and with University policy, undergraduate and post-baccalaureate students achieving a grade of 70% or higher *and who choose the P/NP option* will receive a Pass. Graduate students achieving a grade of 80% or higher and who choose the P/NP option will receive a Pass.

ASSIGNMENT INFORMATION

COURSE OUTLINE

Date	Topic	Readings	Assignments
Week 1 6/20-6/26	Welcome & Navigating the Brain	Key-DeLyria 1 & 2	Lab 1 Due: 6/26 11:59 PM
Week 2 6/27-7/3	Neurons	Key-DeLyria 3	Lab 2 Due 7/3 11:59 PM
Week 3 7/4-7/10	Brain Development & Protecting and Feeding the Brain	Key-DeLyria 4 & 5	Lab 3 Due 7/10 11:59 PM
Week 4 7/11-7/17	Neurology of Sensation	Key-DeLyria 6	Learning Experience & Lab 4 Due: 7/17 11:59 PM
Week 5 7/18-7/24	Sensory and Motor Systems	Key-DeLyria 7	Lab 5 Due 7/24 11:59 PM
Week 6 7/25-7/31	Motor Speech and Swallowing Systems	Key-DeLyria 8	Lab 6 Due 7/31 11:59 PM
Week 7 8/1-8/7	Neurology of Language	Key-DeLyria 9	Lab 7 Due 8/7 11:59 PM
Week 8 8/8-8/14	Neurology of Cognition and Emotion	Key-DeLyria 10	Lab 8 Due 8/13 11:59 PM

ADDITIONAL COURSE INFORMATION

Stay Connected:

[Speech and Hearing Sciences website](https://www.pdx.edu/speech-hearing-sciences/): <https://www.pdx.edu/speech-hearing-sciences/>

[SPHR Facebook page](https://www.facebook.com/pdxspher/): <https://www.facebook.com/pdxspher/>

SPHR Google Groups: Undergraduate and Postbacc students who have registered their major as SPHR will be automatically subscribed to the SPHR Undergraduate Student Google group or SPHR Postbaccalaureate Student Google group as appropriate. These email groups will be used for SPHR communications related to registration, course offerings, departmental events, and job/volunteer opportunities. SPHR Graduate students will be automatically subscribed to a Google group. If you are

not registered in the major but wish to be added to a google group, email your request to sphr@pdx.edu.

Course Evaluations: Online evaluations are sent to students via their PSU email at the beginning of Week 9 with reminders each Monday until the evaluation period closes the night before grades are released. For summer courses, online evaluations are sent to students via their PSU email on the last day of the course. Online evaluations are accessible through virtually any internet-connected device (smartphone, tablet, computer, etc.).

Diversity: In this classroom, we will support and value diversity. To do so requires that we: respect the dignity and essential worth of all individuals; promote a culture of respect toward all individuals; respect the privacy, property, and freedom of others; reject bigotry, discrimination, violence, or intimidation of any kind; practice personal and academic integrity and expect it from others; promote the diversity of opinions, ideas, and backgrounds which is the lifeblood of a university. For additional information, please see the [Office of Global Diversity and Inclusion](#).

Access and Inclusion for Students with Disabilities : PSU values diversity and inclusion; we are committed to fostering mutual respect and full participation for all students. My goal is to create a learning environment that is equitable, useable, inclusive, and welcoming. If any aspects of instruction or course design result in barriers to your inclusion or learning, please notify me. The [Disability Resource Center \(DRC\)](#) provides reasonable accommodations for students who encounter barriers in the learning environment.

If you have, or think you may have, a disability that may affect your work in this class and feel you need accommodations, contact the Disability Resource Center to schedule an appointment and initiate a conversation about reasonable accommodations. The DRC is located in 116 Smith Memorial Student Union, 503-725-4150, drc@pdx.edu, <https://www.pdx.edu/drc>.

- If you already have accommodations, please contact me to make sure that I have received a faculty notification letter and discuss your accommodations.
- Students who need accommodations for tests and quizzes are expected to schedule their tests to overlap with the time the class is taking the test.
- [Environmental Health & Safety](#) provides more information about emergency preparedness.

Academic Conduct: *Academic dishonesty will not be tolerated.*

Any academic dishonesty will automatically result in a "0" for that assignment. Academic dishonesty includes cheating and fraud, including but not limited to: (a) plagiarism, which includes, but is not limited to, word for word copying, using borrowed words or phrases from original text into new patterns without attribution, or paraphrasing another writer's ideas; (b) the buying and selling of all or any portion of course assignments and research papers; (c) performing academic assignments (including tests and examinations) for other persons; (d) unauthorized disclosure and receipt of academic information; and (e) falsification of research data.

- [PSU Student Code of Conduct](#)
- [Definition of Academic Misconduct](#)

Please be aware that should you be found responsible for a violation of the Code (including academic dishonesty), you could be sanctioned to suspension or expulsion from the University, or a disruption in your progress in the program. For additional information, please see the [office for the Dean of Students](#).

For tips to avoid plagiarism, please see the [Library's Avoid Plagiarism site](#).

Incompletes: [Grading System](#)

Eligibility Criteria

1. Required satisfactory course completion/participation. The quality of the work is satisfactory, but some essential work remains. In addition, the student must have successfully completed most of the course work at the time the student requests the Incomplete, with a minimum grade up to that point of a C- for undergraduate, or B- for a graduate level course.
2. Reasonable justification for request. Reasons for assigning the Incomplete must be acceptable by the instructor. A student does not have the right to demand an Incomplete. The circumstances should be unforeseen or be beyond the control of the student. The instructor is entitled to request appropriate medical or other documentation to validate the student's request.
3. Incomplete grade is not a substitute for a poor grade. The Incomplete grade is not meant to create the opportunity for special or additional work for a student to raise a poor grade, or for the opportunity to take the course over by sitting in on the course in a later term without registering or paying for it.
4. Written agreement. A written or electronic agreement will be endorsed by both the instructor and student. The document will specify a) the remaining work to be completed, b) the highest grade which may be awarded upon submission of remaining items, and c) the date which the missing work is due. The latter may not exceed one year from the end of the term for enrollment for the given course. A template "Incomplete Contract" is available on Registrar's website.
5. Resolving the Incomplete. Instructors may not encourage students to "sit in" an entire future course in order to resolve the Incomplete grade. If the student needs to retake the entire course, they should be given the grade presently earned, and must formally register for the future class they will be attending. If the missed portion of the course is no longer available, instructors may offer an alternative assignment. Grading weight of the alternative assignment should not exceed the original assignment. Students are fully responsible for monitoring all due dates.

Other Rules:

1. GPA Calculation: Incomplete grades are not included when calculating GPA.
2. Deadline for Completion: The deadline for completion of an Incomplete is one calendar year. The instructor may set a shorter deadline, which is binding. Any request for a longer deadline must be requested via petition to the Scholastic Standards Committee or Graduate Council.
3. Failure to make up an Incomplete by the end of one year:
 - a. Undergraduate Incomplete Grades: The mark of "I" will automatically change to a grade of "F" or "NP", depending on the grading option chosen by the student upon registration. If the Incomplete converts to an F, the F grade is included in calculating GPA.
 - b. Graduate Incomplete Grades: The Incomplete will become part of the permanent record for a graduate course.
4. Graduating Undergraduate Students: Incompletes awarded in undergraduate courses taken in Fall 2006 or later will automatically change to a grade of "F" or "NP" before conferral of the degree. The faculty of record may submit a grade change no later than 30 days after the degree is awarded. Grades of "F" or "NP" will remain on the academic record after this period and cannot be removed.

Conflict Resolution: Formal and informal options are available for students who believe they have been subjected to or witnessed bias, unfairness, or other improper treatment. In such circumstances, students may contact the [Office of the Dean of Student Life](#).

Religious Holy Days Policy: Any student who, because of religious beliefs, is unable to attend classes on a particular day shall be excused from attendance requirements and from any examination or other assignment on that day. The student shall *make up* the examination or other assignment missed because of the absence. Students should make arrangements with their instructors **prior to** the holy day.

Closure Policy: The PSU Campus Public Safety Office will announce closure of the University for any reason. If you are unsure, please check the [PSU Web page](#). Students should also consider signing up for (“opt-in”) the [PSU Alert system](#) to receive timely notifications of safety alerts directly to a cell phone, pager, phone, or email address.

Student Food Assistance: For information on food assistance and other resources please visit PSU’s [Food Assistance](#) page.

Prohibited Discrimination and Harassment Policy: Portland State is committed to providing an environment free of all forms of prohibited discrimination and sexual harassment (sexual assault, domestic and dating violence, gender or sex-based harassment and stalking). If you have experienced any form of gender or sex-based discrimination or sexual harassment, know that help and support are available. PSU has staff members trained to support survivors in navigating campus life, accessing health and counseling services, providing academic and on-housing accommodations, helping with legal protective orders, and more. Information about PSU’s support services on campus, including confidential services and reporting options, can be found on [PSU’s Sexual Misconduct Prevention and Response website](#) or you may call a Confidential Advocate at 503-725-5672 or by scheduling on-line: psuwr.c.youcanbook.me. You may also report any incident of discrimination or discriminatory harassment, including sexual harassment, to either the [Office of Equity and Compliance](#) or the [Office of the Dean of Student Life](#).

Please be aware that all PSU faculty members and instructors are **required to report** information of an incident that may constitute prohibited discrimination, including sexual harassment and sexual violence. This means that if you tell me about a situation of sexual harassment or sexual violence that may have violated university policy or student code of conduct, I have to share the information with my supervisor, the University’s Title IX Coordinator or the Office of the Dean of Student Life. For more information about these matters that include Title IX, please complete the required student module *Creating a Safe Campus* in your CANVAS.

Land Acknowledgement: Portland State University is located in the heart of downtown Portland, Oregon in Multnomah County. We honor the Indigenous people whose traditional and ancestral homelands we stand on, the Multnomah, Kathlamet, Clackamas, Tumwater, Watlala bands of the Chinook, the Tualatin Kalapuya and many other indigenous nations of the Columbia River. It is important to acknowledge the ancestors of this place and to recognize that we are here because of the sacrifices forced upon them. In remembering these communities, we honor their legacy, their lives, and their descendants.