NEUROLOGY FOR THE SPEECH-LANGUAGE PATHOLOGIST
WESTERN KENTUCKY UNIVERSITY
FALL SEMESTER 2022

SYLLABUS

INSTRUCTOR: **Jenny M. Burton, Ph.D., CCC-SLP**
Assistant Professor
Communication Sciences and Disorders
College of Allied Health Services
108-C Academic Complex, Virtual hours by appointment
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Course Description: This course includes a comprehensive study of how the nervous system is organized and how it affects speech, language, and swallowing. The course reviews the disorders of speech, language, and cognition that are affected by neurological-based diseases, trauma, and disorders. Medical imaging including CT scan, MRI, and other imaging procedures are discussed.

Course Prerequistes: This course is designed for graduate students in speech-language pathology. As such, it is expected that students will already have a strong foundation related to anatomy and physiology for speech and hearing sciences. It is also expected that students will have some experience with using the WKU library or other library systems in order to locate and search for peer-reviewed journal articles and other references. ***Given that this is a three-credit hour course, students are expected to meet weekly for approximately 90 minutes and spend approximately 7.0 hours studying and completing assignments (WKU instructional policies).*** *If students are concerned about prerequisite skills for successful course completion they should contact the instructor the first week of the semester.*

TEXTBOOK
Required
Andreatta, R. D. (2020). *Neuroscience Fundamentals for Communication Sciences and Disorders.* Philadelphia, PA: Plural Publishing, Inc.

Additional required readings will be posted on Blackboard.

Highly recommended but not required
Felten, D. L., & Maida, M. E. (2018). *Netter's Neuroscience Coloring Book*. Amsterdam, Netherlands: Elsevier Health Sciences.

Rouse, M. H. (2020). Neuroanatomy for Speech-Language Pathology and Audiology (Second Edition). Burlington, MA: Jones and Barlett Learning. (available as an eBook through WKU libraries)

KNOWLEDGE & SKILLS OUTCOMES BASED ON ASHA'S STANDARDS FOR SLP CERTIFICATION

1. Students will identify and describe the neurological foundations (i.e. structures, functions, and physiological processes, genetics) of normal human communication and swallowing across the life span. *(IV-B; Knowledge Checks; mid-term exam; final exam; small and large group discussions; labs; cranial nerve evaluation and report; group research presentation)*

2. Students will identify and describe the neurological bases (i.e. structures, functions, and physiological processes, genetics), prevalence/incidence, and core communication and medical impairments of selected neurological-based diseases and disorders. *(IV-B; IV-C; Knowledge Checks; mid-term exam; final exam; small and large group discussions; group research presentation).*

3. Students will identify and describe the neurological bases (i.e. structures, functions, and physiological processes, genetics) of human cognition, motor, and selected sensory systems. *(IV-B; Knowledge Checks; mid-term exam; final exam; small and large group discussions; group research presentation).*

4. Students will demonstrate a cranial nerve evaluation and describe and discuss the results in writing. (*IV-B; IV-D; V-A; V-B; Small group demonstration; written report*)

5. Students will critically review the literature related to a neurological-based topic/condition and orally present a research article regarding the impact of this research on current assessment/treatment procedures for SLPs. *(IV-B; IV-C; IV-F; V-A; Group research presentation)*

6. Students will identify and discuss the contribution/importance of other professionals/nonprofessionals in the management of an individual with a neurological-based communication disorder. (*IV-G; IV-H; Group research presentation; readings; lecture; small and large group discussions; guest speakers*)

Student Disability Services: In compliance with WKU policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, Room 1074. The SARC can be reached by phone number at 270-745-5004 [270-745-3030 TTY] or via email at [SARC's Email Address](#). Please do not request accommodations directly from the instructor without a faculty notification letter (FNL) from The Student Accessibility Resource Center. *Please initiate any requests for accommodations to the instructor as soon as possible.*

Method of Instruction: Instruction will be provided through a combination of asynchronous and synchronous meetings. Learning activities will include: individual and group activities (small group discussion, individual labs, oral presentations, etc.), readings, assigned videos, and individual and group knowledge checks *Students are expected to supply their own lab materials.* Audio or visual recordings of synchronous or one-on-one meetings with the instructor are NOT allowed without consent as this is a violation of the Family Educational Rights and Privacy Records Act (FERPA), a federal law which protects student privacy.

Modes of Communication: Your WKU email address is the ONLY one to which class correspondence will be sent. You are responsible for checking your email and the course site on Blackboard daily. *Graduate students are expected to take initiative to correspond with the instructor as needed if a situation arises related to successful performance in the course.* Questions related to course content or course expectations should be posted on the Discussion Board. During the week (M-F), the instructor or TA will make every effort to respond to emails/posts within 24 hours. If emails/posts are received over the weekend, a response will be sent the next business/work-day. If a student has a personal situation

that arises and they need to inform the instructor, this should be done using email, not the Discussion Board.

COVID-19 Statement: All students are strongly encouraged to get the COVID-19 vaccine. Out of respect for the health and safety of the WKU community and in adherence with CDC guidelines and practices of all public universities and colleges in Kentucky, the University requires that a cloth face covering (reusable or disposable) that covers both the nose and mouth must be worn at all times when in public areas within all buildings. Students must properly wear face coverings while in class regardless of the room size or the nature of the classroom activities. Students who fail to wear a face covering as required will be in violation of the WKU Student Code of Conduct and will be asked to comply or will face disciplinary action, including possible dismissal from the University. Accommodations can be requested in special cases through the Student Accessibility and Resource Center (SARC): 270-745-5004 (voice), 270-745-3030 (TTY), or 270-288-0597 (video).

All students must immediately report a positive Covid-19 test result or close contact with a person who has tested positive to the Covid-19 Assistance Line at 270-745-2019. The assistance line is available to answer questions regarding any Covid-19 related issue. This guidance is subject to change based on requirements set forth by public health agencies or the office of the governor. Please refer to the Healthy on the Hill website for the most current information. **Website for Healthy on the Hill**

Grading: *Please see finalized syllabus posted on Blackboard*

Course grades: Letter grades will be assigned using the following cut-off percentage levels for points possible in the course:

Percentage and Assigned Letter Grade	Percentage and Assigned Letter Grade
93% and above = A	76% to 68% = D
92% to 85% = B	67% and below = F
84% to 77% = C	

This grading scale is consistent with other graduate level courses in the Department of Communication Sciences and Disorders at WKU.

Attendance/in-class participation

As a professional courtesy, if you need to miss a class for any reason, please email the instructor at least 24 hours in advance. Attendance will be taken at the end of each class meeting and points posted immediately afterwards. In addition, students will be asked from time to time to participate in labs during the class meetings (e.g., primitive drawing activities, creation of drawings/diagrams, clinical demonstrations) small group or large discussions, etc. *No make-up points for these activities will be offered for any reason. No make-up points are offered for missed classes for any reason. Please do not ask. In addition, excessive net surfing, reading emails, working on assignments for other classes, sending text messages, side-conversations, using social media, or tardiness will affect your attendance/participation grade in this course.*

Midterm and Final Exam

Both exams will consist of a variety of questions (Case study, true/false, multiple choice, matching, fill in the blank, and short answer etc.). Directions and submission dates will be posted on Blackboard. Exams will include content covered in the synchronous meeting and asynchronous recordings and assigned readings and websites. Students may use their notes or other resources, but they must complete their own independent work. Exams are not necessarily comprehensive in nature. However, *these exams will be timed with no backtracking in order to help you prepare for the PRAXIS.*

Cranial nerve assessment, brief write-up

Students will conduct and write the results for three cranial nerve assessments. They will submit a video recording of only one assessment. This assignment will be modified as needed to comply with COVID-19 guidelines. A report template and scoring rubric will be provided for this write-up. More details regarding this assignment will be discussed in class.

Group research presentation related to neurological topic or condition

Students will work in groups of 3 or 4 and select a neurological-based topic or disorder from a list provided by the instructor. Each group will prepare a 20 to 25 minute in-service presentation for the class regarding the topic/disorder (e.g., prevalence/incidence, core medical and communication deficits, and nature/characteristic of the brain-based structures involved). All references used and the peer-reviewed article must be approved by the instructor. A detailed scoring rubric will be provided for this project. More details regarding this project will be discussed in class. Students will complete this project in multiple steps with feedback from the instructor and/or teaching assistant in order to ensure adequate progress.

Tentative Course Topics and Schedule (more details will be posted on Blackboard)

Week	Date	Tentative Topic	Chapters
1	8/24	Introduction; Organization, structure, and function of neurons; Neural Signaling	Ch. 1, 2, 3
2	8/31	Anatomical nomenclatures, embryology, the spinal cord, and the brainstem (includes cranial nerves)	Ch. 4
3	9/7	Anatomical nomenclatures, embryology, the spinal cord, and the brainstem (includes cranial nerves)	Ch. 4
4	9/14	The diencephalon, cerebrum, cerebral cortex, and infrastructure of the CNS	Ch.5
5	9/21	The diencephalon, cerebrum, cerebral cortex, and infrastructure of the CNS	Ch.5
6	9/28	Cranial nerve exams	TBD

7	10/5	Sensation, perception, and the somatosensory system	Ch. 6
8	**10/12**	**Mid-term exam to be completed by the end of the week**	
9	10/19	Motor System	Ch. 8, 9, 7
10	10/26	Auditory-Vestibular System	Ch. 15, 11
11	11/2	Group presentations	Ch. 13
12	11/9	Group presentations	Ch. 14.
13	11/16	*ASHA convention, no synchronous meeting*	TBD
14	11/23	*Thanksgiving Holiday*	
15	11/30	Imaging Procedures and the neurological exam; Group presentations	TBD
16	**12/7**	**FINAL EXAM WEEK**	

Technology Management: This course will include use of Blackboard software. Managing student technology is the sole responsibility of the student. The student is responsible for making sure that: (a) student word processing software is compatible with that used by the University; (b) student email software is working properly and that students know how to use it (e.g., to send attachments to the professor); (c) Internet service providers' equipment and software are installed and working properly in conjunction with student computers; (d) in the event that a student's computer stops working properly or becomes totally inoperative, the student has another means by which he or she can successfully complete the course; and (e) any other student technology problem or issue gets successfully resolved; this in part implies that if a student cannot resolve any personal technology difficulties, his or her only workable solution may be to drop the course. Please familiarize yourself with the business hours of WKU's IT/Topper Tech help desk as well as the website and alternative means of communication with the IT department. **The Topper Tech/IT Help Desk can be reached at 270-745-7000** or online at Topper Tech and WKU IT Help Desk Website

Academic Integrity: All students are expected to understand and abide by WKU's policy on Academic Integrity and Student Code of Conduct. This includes matters related academic dishonesty and plagiarism. To represent ideas or interpretations taken from another source as one's own is plagiarism. Plagiarism is a serious offense. The academic work of students must be their own. Students must give the author(s) credit for any source material used. Plagiarism in ANY portion of this course will be severely penalized and university policies will be enforced.

Title IX Sexual Misconduct/Assault Policy: Western Kentucky University (WKU) is committed to supporting faculty, staff and students by upholding WKU's Sex and Gender-Based Discrimination, Harassment, and Retaliation (#0.070) and Discrimination and Harassment Policy (#0.2040). Under these

policies, discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Title IX Coordinator, Deborah Wilkins, 270-745-5398 or Title IX Investigators, Michael Crowe, 270-745-5429 or Joshua Hayes, 270-745-5121. Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a faculty member, WKU faculty are "Responsible Employees" of the University and MUST report what you share to WKU's Title IX Coordinator or Title IX Investigator. If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's Counseling and Testing Center at 270-745-3159.

Comprehensive resources used by the instructor
ASHA Learning Pass

Batshaw, M., Roizen, N., & Pellegrino, L. (2019). *Children with Disabilities* (Eighth Edition). Baltimore, MD: Brookes Publishing.

Felten, D., O'Banion, M., & Maida, M. (2021). Netter's Atlas of Neuroscience (Fourth Edition). Amsterdam, Netherlands: Elsevier Health Sciences.

Louis, E. D., Mayer, S. A., & Noble, J. M. (2021). *Merritt's Neurology* (Fourteenth Edition). Philadelphia, PA: Wolters Kluwer.

Srinivasan, J., Chaves, C., Scott, B., & Small, J. (2019). *Netter's Neurology* (Third Edition). Amsterdam, Netherlands: Elsevier Health Sciences.

Groups may select from the following neurological based topics/disorders for their oral presentation.
- Multiple Sclerosis (MS)
- Amyotrophic Lateral Sclerosis (ALS)
- Alzheimer's Disease
- Huntington Disease
- Parkinson's Disease
- Vascular Dementia *or* Lewy Body Dementia – *please select one specific dementia not just the general term "dementia"*
- Down syndrome *or* Fragile X syndrome
- Cerebral Palsy
- Neuroplasticity (topic)
- Bilingualism (topic)
- Mysathenia Gravis
- Gullain-Barré syndrome
- Attention Deficit Disorder (ADHD)**,** Dyslexia/Specific Reading Disorder, *or* an approved motor speech disorder (e.g., Childhood Apraxia of Speech, or a specific dysarthria)
- CVA/Stroke

Writing Center Assistance: The Writing Center on the Bowling Green campus will have writing tutors available to offer advice to current WKU students (including graduate students) on any stage of their writing projects. In-person tutoring is available in Cherry Hall 123 from 9-4 Monday through Friday and in the Cravens Commons (at the horseshoe-shaped reference desk) from 5-9 on Sunday through Thursday evenings. Students may also request feedback on their writing via email or arrange a real-time

Zoom conference to discuss a paper. See instructions and how-to videos on the website WKU Writing Center for making appointments. Students may also get short writing questions answered via email; just put "Quick question" in the subject line to Writing Center's Email Address They can also offer assistance with APA use/formatting.

WKU Counseling Center: Your mental health is extremely important. WKU Counseling Center provides individual counseling sessions related to stress management and mental health concerns (e.g., anxiety, depression, stress, time management, etc.) to help you cope with school-work-life balance. The best way to schedule an appointment is to call their office at (270) 745-3159 or stop by Potter Hall 409 and they can work to coordinate schedules and get you an appointment ASAP Counseling Center's Email Address.