Instructor: Dr. Kristine Lundgren
E-mail: k_lundgr@uncg.edu
Office: 320 Ferguson
Office hours: By appointment

3.0 Credit Hours

COURSE DESCRIPTION:
This course is planned for advanced undergraduates and graduate students in the Department of Communication Sciences and Disorders. Course content serves as an introduction to neuroscience as it relates to speech, language, and hearing.

COURSE OBJECTIVES:
This course will meet some of the required Knowledge And Skill Acquisition (KASA) standard for American Speech, Language and Hearing Association (ASHA) certification

ASHA Standard, Course Learning Outcomes and Goals:

ASHA Standard IV-B: Students will demonstrate knowledge of basic human communication and swallowing processes, including the appropriate biological, neurological, acoustic, psychological, developmental, and linguistic and cultural bases. Students will demonstrate the ability to integrate information pertaining to normal and abnormal human development across the life span by

1. Demonstrating the ability to analyze, synthesize, and evaluate information in the areas of basic human communication processes.
2. Specifying the anatomical characteristics and structures of the central nervous system, including the cerebrum, cerebellum, brainstem, spinal cord, diencephalon, and basal ganglia.
3. Summarizing the anatomical characteristics and structures of the peripheral nervous system, including the spinal nerves, the cranial nerves, and the autonomic nervous system.
4. Explaining the blood supply to the brain.
5. Summarizing how cerebrospinal fluid circulates throughout the brain
6. Relating neurophysiologic processes to the production of typical communication and communication associated with progressive disease processes.

ASHA Standard IV-C: Students will demonstrate knowledge of communication and swallowing disorders and differences, including the appropriate etiologies, characteristics, anatomical/physiological, acoustic, psychological, developmental, and linguistic and cultural correlates by

1. Demonstrating an understanding of neurological basis of cognitive aspects of communication, including memory, learning, sequencing, problem-solving, and executive functioning.
2. Specifying knowledge of hearing, including the impact on speech and language.
LEARNING OUTCOMES AND GOALS:

After completing this course you will be able to
1. Describe the organization of the brain, including lateralization, lobes, brainstem, and cerebellum
2. Describe hemisphere dominance for language
3. Explain the function of the cranial nerves associated with human communication
4. Describe the functional categorizations of the nervous system
5. Explain neurons, synapses and the mechanisms of actions
6. Describe the descending and ascending motor and sensory pathways
7. Describe the blood flow to the brain, including the Circle of Willis and the cerebral arteries
8. Discuss normal aging and its impact on the central nervous system
9. Explain impact of stroke and traumatic brain injury to the brain

COURSE WEBSITE: Please access this course via CANVAS.

REQUIRED TEXTBOOK: Course readings are intended to enrich the student’s knowledge in the field of neurology by reinforcing and supplementing video lectures. One textbook is required:


TECHNOLOGY REQUIREMENTS:

• A SECURE Internet connection.
• Internet browser preferably Firefox or Chrome
• iSpartan Account

Submit reports and projects as Microsoft word documents (either Word, PowerPoint, Excel, etc. as required by the assignment).

• View presentations with Microsoft PowerPoint.
• E-mail communication will be conducted by means of the UNCG iSpartan email system only! You have been provided a UNCG e-mail address. It is this same address that will be used for your login to CANVAS and so all communication will be from and through CANVAS. CANVAS will use your UNCG email address.
• PLEASE PUT CSD 588 IN THE SUBJECT HEADING FOR ALL CORRESPONDENCE with this instructor!!
• All students are required to maintain high-speed internet access throughout the duration of the course. Failure to remember passwords or lack of access to the internet are not “technical difficulties” and will not be accepted as extenuating circumstances for assignment submission or for taking quizzes.

TECHNICAL SUPPORT: If you are experiencing any technical problems with the course website please contact the Office of Academic Outreach at oao@uncg.edu or by phone at 336-315-7494. This is the quickest way to receive assistance on issues regarding the website or software required for the course.

INTERACTION WITH THE INSTRUCTOR: The instructor is available by email and through the question/answer section of CANVAS. Please use the question/answer discussion board on CANVAS for questions pertaining to course content or assignments so that all students can benefit from the information. *For personal matters please email the instructor (k.lundgr@uncg.edu) directly and allow 24 hours for a response.

ACADEMIC INTEGRITY POLICY: All students are expected to adhere to the Academic Integrity Policy as published in the UNCG Student Handbook. Failure to do so will result in lowering of the course grade or expulsion from the class. The policy is available at http://academicintegrity.uncg.edu
LEARNING DIFFERENCES AND DISABILITIES:
For students with documented physical or learning differences and/or disabilities, appropriate arrangements will be made for completion of all class and assessment experiences. However, documentation of these disabilities and/or differences must be made available to the instructor prior to the first assessment experience.
EVALUATION AND GRADING: UNDERGRADUATES

Quizzes (10x10 points each) 100 points
Video Reflection Papers (4x10 points each) 40 points
Learning Objects (9x5 points each) 45 points
Exams (2 exams and a final exam) 700 points
Total Points 885 Points

EVALUATION AND GRADING: HONORS STUDENTS AND GRADUATE STUDENTS

Quizzes (10x10 points each) 100 points
Video Reflection Papers (12x10 points each) 40 points
Learning Objects (9x5 points each) 45 points
Exams (2 exams and a final exam) 700 points
Final Project 100 points
Total Points 985 Points

Grading Scale: Letter grades will be assigned based on the points earned by each student as a percent of the total points available throughout the course. Letter grade assignments are as follows:

Grading Scale For Graduate Students

100-95% A
94.75-90% A-
89.75-88.75% B+
88.5-85% B
84.75-80% B-
79.75-78% C+
77.75-75% C
74.75-70% C-

Note: Grades of “A+” are not assigned at the graduate level and C-, D+, D, D- are not permitted for graduate students.

Grading Scale for Undergraduate Students

100-97.5% A+
97.49-93.0% A
92.99-90.0% A-
89.99-87.5% B+
87.49-85.0% B
84.99-80.0% B-
79.99-78.0% C+
77.99-75.0% C
74.99-70.0% C-
69.99-68.0% D+
67.99-65.0% D
64.99-60.0% D-
59.99 or below F
It is your responsibility to complete the requirements ON TIME to earn your grade.

Website Activity Policy:
Following UNCG’s policy, it is expected that the average student in this course will need to spend 2-3 hours per credit hour in out-of-class assignments. This is a 3 credit hour course so it is assumed that the average student will spend at least 6-10 hours per week on course requirements. This time should be spent viewing video lectures, reading online materials, checking for course updates and announcements, completing quizzes, etc. Inability to meet this requirement will reduce your ability to receive the maximum benefit from the course. Therefore, a website activity policy will be enforced. You will be expected to log into the course at least 2 times per week. Contact your instructor if you have an extenuating circumstance.

PLEASE NOTE: COURSE DUE DATES ARE SUNDAY 8AM EST
All assignments and activities are to be completed and submitted through the designated assignment link by 8am EST on the date listed on the course calendar.

All assignment links will become inactive at 8am EST on the due date. Once the link has disappeared, the opportunity to submit the assignment has expired.

No late assignments are accepted. If you do not submit an assignment you will receive a 0 for that assignment.

For each of the modules, learners will complete assigned readings (text and online readings), complete an online and/or PowerPoint tutorial, and participate in discussion on CANVAS. Learners will complete online exams and quizzes. Learners will also participate in periodic formative assessments aimed at providing feedback on course structure and design.

• It is imperative that you have a secure internet connection while taking quizzes AND EXAMS. It is not advisable to use an unsecured or Wi-Fi connection when taking a quiz or exam as these may be unstable. Loss of Wi-Fi connection is never an excuse for inability to complete a quiz or exam.

• If you have any conflict with the scheduled course dates please read the rescheduling instructions located below:
  • Acceptable rescheduling reasons: Please note that it is your responsibility to provide proper documentation to substantiate that your absence is excused (according to The University of North Carolina at Greensboro regulations). You MUST provide documentation of your acceptable excuse at least 48 hours prior to the course requirement.
  • Example of acceptable documentation
    ▪ Letters from faculty or staff
    ▪ Doctor’s Note
    ▪ Other supporting documentation
  • Unacceptable rescheduling reasons
    ▪ Conflict with extracurricular activities
    ▪ Undocumented personal illness
    ▪ Conflict with athletic practices
• Students will have 24 hours from the close of the quiz or assignment to complete this requirement providing acceptable documentation is received before the quiz, test, assignment is due. Course requirements will not be reopened after 24 hours even if acceptable documentation is received.

When a course requirement is missed and documentation of acceptable reason is not received within 24 hours a grade of 0 will be earned!
ASSIGNMENTS:

Exams (E):
There will be two exams and a final exam for this class. The first two exams will be worth 200 points each and the final will be worth 300. All materials, included in the lectures, PowerPoint presentations, and the textbook, are subject to testing. Once you begin the exam, you must finish. **BE SURE TO HAVE A SECURE INTERNET CONNECTION WHEN TAKING THESE EXAMS. I SUGGEST USING A COMPUTER LAB OR THE LIBRARY.**

Quizzes (Q):
There will be 10 quizzes for this class. Questions come from the required readings. You will have 15 minutes to complete each online quiz and you will have 2 opportunities to earn your best grade. Quiz access is located within the corresponding Module.

Reflection Papers (RP):
There will be 4 reflection papers for this class. Reflection papers should be submitted via the assignment link under each module. Reflection Papers are worth 10 points each and should be **NO MORE THAN** one page in length, single-spaced, and 12-point font. Please refer to the pdf “Reflection Tip Sheet” and the reflection rubric for details on grading.

Learning Objects (LO):
There will be 9 learning objects for the class, available through the WISC-online website. Links for the learning objects are located in the Modules to which they relate. Once you complete a learning object the website will give you a page that says “Congratulations you have completed the learning object”. Take a screen shot of this page and submit it to the link provided labeled “Submit: Learning Object Completion Certificate” in the appropriate Module. These learning objects will be worth 5 points each.

Project for Honors Students and Graduate Students ONLY (FP):
You will be expected to complete a project focused on a particular brain structure and its function. Please see Syllabus/calendar section of CANVAS for more information.
Additional References:


Additional resources and weblinks are available on the CANVAS site.
COURSE CALENDAR:

Course Organization: The course content will be organized into fourteen modules: (Dates will only change if unforeseen circumstances arise. Any changes will be announced on CANVAS).

<table>
<thead>
<tr>
<th>Module</th>
<th>Topic</th>
<th>Readings</th>
<th>Date Quiz/Exam Closes/Assignments Due</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>Module 1</td>
<td>Open 01/11/16</td>
<td>Ch 1 (1-16)</td>
<td>Module 1 Quiz (Quiz 1): Due 1/17 8am EST</td>
<td>Quiz 1 will be open for 15 minutes once you begin the quiz. You need to read the material BEFORE you take the quiz.</td>
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<td></td>
<td>-Course Introduction/Basics</td>
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<td>-Historical Perspectives</td>
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<td>-Imaging Techniques</td>
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<td>-Anatomical Directions</td>
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<tr>
<td>Module 2</td>
<td>Open 01/18/16</td>
<td>Ch 2 (19-24), Ch 4</td>
<td>Module 2 Quiz (Quiz 2) Due 1/24 8am EST</td>
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<td>-Neural Transmission</td>
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<td>-Nerve Cell</td>
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<td>Module 3</td>
<td>Open 01/25/16</td>
<td>Ch 3 (54-56)</td>
<td>See Module 4 for quiz information</td>
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<td>-Protection of the Brain</td>
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<td>-Surface Anatomy</td>
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<td>Module 4</td>
<td>Open 02/01/16</td>
<td>Ch 2 (25-33)</td>
<td>Module 3&amp;4 Quiz (Quiz 3): Due 2/7 8am EST</td>
<td>This quiz covers information from Modules 3 and 4.</td>
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<td>-Bones of the Cranium</td>
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<td>-Frontal Lobe</td>
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<td>-Parietal Lobe</td>
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<td>Module 5</td>
<td>Exam 1</td>
<td>Exam 1: 02/14/16 Due by 8am EST</td>
<td>You will have 90 minutes to complete the exam once it is opened. The exam is worth 200 points.</td>
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<td><strong>Module 6</strong></td>
<td>Occipital Lobe Temporal Lobe Insula</td>
<td>Ch 2 (25-33)</td>
<td>See Module 7 for Quiz information Video Reflection Paper (R2): Due 2/21 8am EST</td>
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<td><strong>Module 7</strong></td>
<td>-Fibers -Limbic System</td>
<td>Ch 2 (29-30), Ch 6 (125-149) Ch 2 (33-35)</td>
<td>Module 6 &amp; 7 Quiz (Quiz 4) Due: 2/28 8am EST Learning Object 5: Due 2/28 8am EST Learning Object 6: Due 2/28 8am EST Quiz encompasses information from Modules 6 and 7.</td>
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<td><strong>Module 8</strong></td>
<td>-Basal Ganglia -Deep Structures -Diencephalon</td>
<td>Ch 2 (35-40)</td>
<td>Module 8 Quiz (Quiz 5) Due: 3/6 8am EST Hydrocephalus Reflection/Questions (R3): Due 3/6 8am EST</td>
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<td><strong>Module 9</strong></td>
<td>-Ventricles/CSF -Visual system</td>
<td>Ch 3 (56-59) Ch 5 (114-118)</td>
<td>Module 9 Quiz (Quiz 6) Due: 3/20 8am EST</td>
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<td><strong>Module 10</strong></td>
<td>Exam 2</td>
<td>Exam 2: 03/27 Due by 8am EST</td>
<td>You will have 90 minutes to complete the exam once it is opened. The exam is worth 200 points.</td>
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| Module 11 | -Vascular System  
- Cerebellum | Ch 3 (59-65)  
Ch 2 (40), Ch 6(143-146) | Module 11 Quiz (Quiz 7) Due: 4/3  
8am EST |
|---|---|---|---|
| Module 12 | -UMN vs. LMN damage vs. cerebellar damage  
-PT damage vs. EPT damage  
-Spinal cord anatomy  
-Motor unit | Ch 6 (131-138)  
Ch 3 (47-50)  
Ch 2 (43-46) | Module 12 Quiz (Quiz 8) Due: 4/10  
8am EST  
Learning Object 7: Due 4/10  
8am EST  
Learning Object 8: Due 4/10 8am EST |
| Module 13 | -Brain stem anatomy  
-Cranial Nerves I-VII | Ch 2 (40-43)  
Ch 7 (151-156) | Module 13 Quiz (Quiz 9) Due: 4/17  
8am EST  
Learning Object 9: Due 4/17 8am EST |
| Module 14 | -Cranial Nerves VIII-XII | Ch 7 (156-162) | Module 14 Quiz (Quiz 10): Due 4/24  
8am EST  
Video Reflection Paper (R4) Due: 4/24  
8am EST |
| FINAL | Final Exam | Final Exam: Due 5/1 by 8am EST | You will have 120 minutes to complete the exam once it is opened. The exam is worth 300 points. |
Overview of Course by Topic with Corresponding Text:

- Historical Perspectives (1-16)
- Intro
- Imaging techniques
- Directions
- Nerve cell (19-24)
- Neural transmission (Ch 4)
- Meninges (54-56)
- Bones of the cranium
- Surface anatomy (25-33)
  - Frontal lobe
  - Parietal lobe
  - Occipital lobe
  - Temporal lobe
- Limbic system (33-35)
- Fibers (29-30)
  - Association
    - Arcuate fasciculus
    - Uncinate
    - Cingulum
  - Projection (125-133)
  - Commissural
    - Corpus callosum
- Basal ganglia (38-40)
- Other deep structure nuclei
- Diencephalon (thalamus) (35-38)
- Ventricles (56-59)
- Cerebellum (40, 143-146)
- Vascular supply (59-65)
- Visual system (114-118)
- Brain Stem Anatomy (40-43)
- Pyramidal tract system (125-149)
- UMN vs LMN damage (131-136)
- Spinal cord (43-50)
- Motor unit (136-138)
- Cranial nerves (151-167)

Readings for CSD 588 Listed by Chapter Sequence

Chapter 1 pages 1 – 16
Chapter 2 pages 19-46
Chapter 4 pages 89-104
Chapter 3 pages 47 – 66, and 76 – 87
Chapter 6 pages 125-149
Chapter 5 pages 114 - 118
Chapter 7 pages 151 – 168
Chapter 8 pages 169 – 186