

**Class Time:** Asynchronous and Online, but Dr. Larimore and Dr. Singleton will be on Zoom to assist with the class on Tuesday and Thursday from 10AM – 11:15 AM EST.

**Required Texts:**

*1) Diseases of the Nervous System*. Harald Sontheimer. Academic Press. ISBN: 978-0-12-800244-5

2) Neuroscience Basics. Larimore. 1st Edition. Academic Press

Recommended Companion Texts:  
Principles of Neural Science. Kandel, Swartz, and Jessel. McGraw Hill. 4th or 5th Edition.

**Course Description:**This class examines the cell types that make up the human brain and how each of these cell types function properly to make us who we are. We will examine the sub-cellular nature of several different neurological diseases to fully understand the important functions of individual brain cells.

**Course Objectives:** Upon successful completion of this course, the student will demonstrate knowledge of altered cellular functions in neurological diseases. Students will be able to translate neuroscience knowledge and disease proficiency into a review article.

**Skill Objectives:**

* Critical thinking/Problem Solving – through weekly article analysis, students will be able to critically read and evaluate scientific literature. Through designing experiments, students will sharpen their ability to think critically about neuroscience.
* Oral Communication – through article presentations, students will demonstrate their abilities to present scientific findings to a broad audience.
* Written Communication – through weekly assignments and the review paper, students will demonstrate their ability to write scientifically.
* Teamwork/Collaboration – working with a team for presentations will enable the students to practice real-world teamwork competencies that are taught as a part of SUMMIT.
* Digital Technology – students will learn how to navigate various online resources to complete assignments and collaborate with peers. Students will actively use Canvas, PubMed, Google Drive and Power point.
* Research Skills – as a result of this course, students can design an experiment, analyze results, draw conclusions, and critically analyze the overall conclusions.
* Career Management – at the end of this course, there is a day to add the relevant skills gained from this course to a student’s CV or resume. Additionally, there will be time to work on personal statements and discuss cover letters.

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| **Grade Scale** | |
| A | 91-100% |
| A- | 90-91.1% |
| B+ | 88-89.9% |
| B | 82-87.9% |
| B- | 80-82.9% |
| C+ | 78-79.9% |
| C | 72-77.9% |
| C- | 70-72.9% |
| D+ | 68-69.9% |
| D | 62-67.9% |
| D- | 60-62.9% |
| F | below 60.0 |

**Grading Policy:** The final grade for this course will be based on the following.

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| Blog Posts | 50 points (10 analyses, 5 points each) |
| Blog Comments | 20 points (10 comments, 2 points each) |
| Test on Larimore Book | 30 points |
| Tests | 200 points (2 tests, 100 points each) |
| Review Paper Outline | 10 points |
| Review Paper Draft | 25 points |
| Review Paper | 100 points |
| **Total** | **435 points** |
| \*additional points or assignments may be added by the professors | |

*Grades are not a gift. You earn your grade. You and you alone are responsible for your grade.*

**Expectations of You:** This is an intense upper level **scientific writing and reading course**. Thus, a lot is expected of you. You are required to:

* to read 1 chapter in the textbook **each week**
* to read 2 assigned articles **each week**
* comple**te 2 blog posts a week**.
* **3** tests
* 3000-word novel topic review in lieu of a final.

**Academic Honesty for scientific work: You are responsible for**. Review each course syllabus for the professor’s expectations regarding course work and class attendance. Violations of the honor code can result in failure of the assignment, failure of the course, to expulsion from the college. You speak with your professors if you need clarification about any of these policies.

By placing your name on ANY assignment, you are stating that you completed that assignment with academic honesty. Cheating in this class may keep your grade where you want it, but it will not help your career long term – you cannot cheat the GRE or the MCAT. You must learn this material in order to succeed in science. Additionally, academic dishonesty is reported to medical schools and graduate schools as per their request. Finally, anyone caught cheating relinquishes the privilege of asking for a letter of recommendation from the professors and will receive a 0 on the assignment. **Acts of academic dishonesty will be turned over to Honor Court.**

**Plagiarism:** Do attribute all ideas taken from other sources; this shows respect for other scholars. Plagiarism can include portraying another’s work or ideas as your own, buying a paper online and turning it in as if it were your own work, or not citing or improperly citing references on a reference page or within the text of a paper. Passing off someone else’s work as your own represents intellectual fraud, theft, and violates the core values of our academic community. Plagiarism is passing off any work that is not yours as your own work \*\* EVEN WITH A CITATION\*\*\*. If you are using a source and citing the source, the information from that source STILL must be reworded in your own voice. Putting a citation behind a statement gives ownership to that source, but, if you do not reword that information, it is plagiarism. Do not cut and paste from the slide, your book, your neighbor, Wikipedia, or the internet. To further your science education, you need to be able re-word science in your own voice. If your answers are not your own, you will receive a 0 for the assignment. **All cases of academic dishonesty will be turned into Honor Court.**

**Intellectual Fraud:** Do not falsify or create data, resources or alter a graded work without the prior consent of your professor. This includes making up a reference for a works cited page or making up statistics or facts for academic work.

**Cheating:** Do not allow another party to do your work/exam or submit the same or similar work in more than one course without permission from the course instructors. Cheating also includes taking an exam for another person, looking on another person’s exam for answers, using exams from previous classes without permission, or bringing and using unauthorized notes or resources (i.e., electronic, written, or otherwise) during an exam. Cheating also includes when you help another student complete a take home exam, give answers to an exam, talk about an exam with a student who has not taken it, or collaborate with others on work that is supposed to be completed independently.

**Course Components:**

*Weekly Reading:* **Each week, you will be assigned a chapter from the Sontheimer textbook** and **two peer-reviewed articles** from primary literature (oneclinical and onebasic research article).

*Tests:* There will be **two** tests through the semester. These tests examine your ability to apply knowledge, not memorize facts. These tests are open notes – but only hand-written notes.

*Weekly Blog Post:* Each week, you will write 2 blog posts (500 – 600 words) on word press (https://wordpress.com/create-blog/). The Tuesday blog post will cover the clinical background and clinical paper for the week and is due at 11:59 PM on Tuesday. The Thursday blog post will cover the basic research background from the chapter and the basic research paper for the week and is due at 11:59PM on Thursday.

When covering the chapter reading, this should serve as a background of sorts for the paper information you will cover. When covering the paper, you should pick a figure or key piece of information, a key takeaway that impacts our understanding of the disorder/disease.

**Course Schedule**

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| *Week 1: Read Chapters 1 – 5 in Larimore Book* | |
| Tues 1/19 | Blog: discuss why this course interests you and how it will move you towards your career goal |
| Thurs 1/21 | Blog: discuss why studying the nervous system is important to society |
| *Week 2: Read Chapter 1 in Sontheimer Blog Audience: Other Scientists* | |
| Tues 1/26 | Blog: discuss the clinical presentation, epidemiology,  standard of care/clinical management & the clinical paper |
| Thurs 1/28 | Blog: |
| Week 3: | |
| Tues 2/2 |  |
| Thur 2/4 |  |
| Week 4: | |
| Tues 2/9 |  |
| Thur 2/11 |  |
| Week 5 | |
| Tues 2/16 |  |
| Thur 2/18 |  |
| Week 6 | |
| Tues 2/23 |  |
| Thur 2/25 |  |

**Course Schedule Continued**

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| Week 7: | |
| Tues 3/2 |  |
| Thur 3/4 |  |
| Week 8: 3/8 – 3/ 12 Peak Week | |
| Week 9: 3/15 – 3/19 Spring Break | |
| Week 10: | |
| Tues 3/23 |  |
| Thur 3/25 |  |
| Week 11: | |
| Tues 3/30 |  |
| Thur 4/1 |  |
| Week 12: | |
| Tues 4/6 |  |
| Thur 4/8 |  |
| Week 13: | |
| Tues 4/13 |  |
| Thur 4/15 |  |
| Week 14: | |
| Tues 4/20 |  |
| Thur 4/22 |  |
| Week 15: | |
| Tues 4/27 |  |
| Thurs 4/29 |  |
| Tues 5/4 |  |
| WED 5/5 | Last Day of Classes |

**Blog Posts are due**

**Blog Comments are due**

*Original Review Article:* In lieu of a final, you will write an original review article. This should be a review of the literature in one of diseases that we covered in the class. DO NOT WAIT UNTIL THE LAST MONTH OF CLASS TO WRITE THIS REVIEW. A solid review takes at least 2 months to prepare and write. A rough draft of the abstract is due just a few weeks into the semester. Brainstorm ideas and write a rough draft of your abstract. This will take some time, so allow for plenty of planning.

*This Review article should include the following:*

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| **Title** | Clear and simple |
| **Abstract (1250 characters)** | Describing novel nature of review and body of literature within the review |
| **Figures (optional)** | 2 figure limit with appropriate figure legends |
| **Review** | 3000 words (not including title, abstract or works cited page) |
| **Work Cited/References** |  |
| See Canvas for examples of original review articles written and published by Agnes Scott students from this class. Also, it adhered to the guidelines you will adhere to for this assignment. | |

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| **Grading Rubric for your Review Outline (10 points)** | |
| **Innovation/novelty of idea/topic (1 point)** | Idea/topic for the review has not been published previously |
| *Consider* comparing 2 diseases or suggesting a new treatment |
| **Background Information  (2 points)** | Background supports the idea/topic |
| Background is clear and flows well |
| Background information is correct |
| **Novel idea/hypothesis  (2 points)** | Solid, testable hypothesis |
| Clearly stated and supported by background information |
| **Supporting Data  (4 points)** | Clear and stated well |
| Summary of the experiments or data from other experiments  (model system and analysis to take place). |
| **Strong Conclusion  (1 point)** | Summarizes background information and supporting data |
| Ties supporting data and background into the hypothesis |

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| **Grading Rubric for your Review Rough Draft (25 points)** | |
| **Innovation/novelty of idea/topic (1 point)** | Idea/topic for the review has not been published previously |
| *Consider* comparing 2 diseases or suggesting a new treatment |
| **Background Information  (5 points)** | Background supports the idea/topic |
| Background is clear and flows well |
| Background information is correct |
| **Novel idea/hypothesis  (2 points)** | Solid, testable hypothesis |
| Clearly stated and supported by background information |
| **Supporting Data  (10 points)** | Clear and stated well |
| Summary of the experiments or data from other experiments  (model system and analysis to take place). |
| **Strong Conclusion  (5 points)** | Summarizes background information and supporting data |
| Ties supporting data and background into the hypothesis |
| **Formatted Correctly  (2 points)** | Use the American Journal for Undergraduate Research format (http://www.ajuronline.org) |

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| **Grading Rubric for your Review Article (100 points)** | |
| **Innovation/novelty of idea/topic (5 points)** | Idea/topic for the review has not been published previously |
| *Consider* comparing 2 diseases or suggesting a new treatment |
| **Background Information  (25 points)** | Background supports the idea/topic |
| Background is clear and flows well |
| Background information is correct |
| **Novel idea/hypothesis  (5 points)** | Solid, testable hypothesis |
| Clearly stated and supported by background information |
| **Supporting Data  (30 points)** | Clear and stated well |
| Summary of the experiments or data from other experiments  (model system and analysis to take place). |
| **Strong Conclusion  (10 points)** | Summarizes background information and supporting data |
| Ties supporting data and background into the hypothesis |
| **Formatted Correctly  (11 points)** | Use the American Journal for Undergraduate Research format (http://www.ajuronline.org) |
| **CWS Proof-Read  (14 points)** | CWS tutor proof-read your FINAL draft with this rubric |
| Incorporated CWS changes |
| Photo of CWS slip showing review of final draft with this rubric and attach image to the end of your document after references |

**Academic Policies**

***Zoom:***

***E-mail***: Instructors will make announcements regularly via e-mail. *It is your responsibility to check your Agnes Scott email account daily.* When responding to a professor over email, ensure your email is professional.Examples here: <https://medium.com/@lportwoodstacer/how-to-email-your-professor-without-being-annoying-af-cf64ae0e4087#.jldd3bxes>

***Plagiarism and Citations:*** In your review article at the end of this class, you will need several outside sources. At no point can you copy work from another student. If you do so, you will receive a 0 on the assignment. If you use an outside source, you MUST reword the content from that source in your own words. If you do not reword the content from the outside source, you will receive a 0 on the assignment. If you use an outside source as a reference, make sure you use the first occurrence (first person to describe a mutation/animal model, etc. – don’t simply cite a review that mentions the first mutation).

***Honor Code:*** All work performed in this course must be in accordance with the Agnes Scott College Honor Code.

***ADA*:** If you have a disability that may have some impact on your work in this class and for which you may require accommodations, please the Office of Academic Advising to register for services. Students that receive accommodation checklists, please meet with me to discuss the provisions of those accommodations as soon as possible.

***Title IX:*** For the safety of the entire community, any incidence of or information about sexual misconduct must be reported immediately to Title IX Coordinator Karen Gilbert (kgilbert@agnesscott.edu, 404-471-6435) or Deputy Title IX Coordinator Kristian Contreras (kcontreras@agnesscott.edu, 404-471-6394).

***Inclusion:*** This course adheres to the principles of diversity and inclusion integral to the Agnes Scott community.  We respect people from all backgrounds and recognize the differences among our students, including racial and ethnic identities, religious practices, and gender expressions.  We strive for our campus to be a safe space in which all students feel acknowledged and supported.  At the same time, we understand that course content, critical inquiry, and classroom dialogues give us opportunities to examine topics from a variety of perspectives.  Such discourse is a defining feature of a liberal arts education, and can compel debates that challenge beliefs and positions, sometimes causing discomfort, especially around issues related to personal identities.  While we uphold and preserve the tenets of academic freedom, we request and invite your thoughtful and constructive feedback on ways that we can, as a community of learners, respectfully assist and challenge one another in our individual and collective academic work.

***Content Warning****:* This course will explore the human brain and behavior, which might raise issues of racism, sexism, classism, heterosexism, cissexism, ableism, and other kinds of privilege.  I invite you to come see me if want more information.  If you feel you will be unable to fully participate in the course requirements, set up a meeting with the course instructor to determine appropriate accommodations.

***Deadlines:*** Attendance and participation will be assessed periodically to determine your engagement and commitment to this class. Students are expected to attend all class periods, except in cases of documented illness or emergency. If a missed class cannot be avoided because of illness or emergency, it is STRONGLY recommended that you contact the instructor IN ADVANCE, or within 24 hours of the class period. Should an emergency or crisis arise, such that you miss class, you must provide legitimate documentation in order for the instructor to consider allowing you to make up missed work.

It is your responsibility to keep up with the class material. Thus, if you miss class, it is up to you to find out from a reliable source if you missed an assignment. It is also your responsibility to stay on top of presentation, quiz and exam deadlines. In-class assignments (such as the experimental design projects), presentations, and quizzes will NOT be available to make up later, unless you have a documented excuse, OR you have contacted me ahead of time.

***Course Evaluations:*** At the end of the semester you will receive an e-mail asking you to submit an evaluation of the course. Please give feedback! Your input is important to the college as a whole and to us as instructors. We take your comments very seriously.

***Academic Honesty****:* The Agnes Scott College honor code embodies an ideal of character, conduct, and citizenship, and is an important part of the College’s mission and core identity. This applies especially to academic honesty and integrity. Passing off someone else’s work as your own represents intellectual fraud and theft and violates the core values of our academic community. To be honorable, you should understand not only what counts as academic dishonesty, but also how to avoid engaging in these practices. You should:

* review each course syllabus for the professor’s expectations regarding course work and class attendance.
* attribute all ideas taken from other sources; this shows respect for other scholars. Plagiarism can include portraying another’s work or ideas as your own, buying a paper online and turning it in as if it were your own work, or not citing or improperly citing references on a reference page or within the text of a paper.
* not falsify or create data and resources or alter a graded work without the prior consent of your professor. This includes making up a reference for a works cited page or making up statistics or facts for academic work.
* not allow another party to do your work/exam or submit the same or similar work in more than one course without permission from the course instructors. Cheating also includes taking an exam for another person, looking on another person’s exam for answers, using exams from previous classes without permission, or bringing and using unauthorized notes or resources (i.e., electronic, written, or otherwise) during an exam.
* not facilitate cheating, which can happen when you help another student complete a take home exam, give answers to an exam, talk about an exam with a student who has not taken it, or collaborate with others on work that is supposed to be completed independently.
* be truthful about the submission of work, which includes the time of submission and the place of submission (e.g., e-mail, online, in a mailbox, to an office, etc.).

**You should understand that penalties result from dishonest conduct, ranging from failure of the assignment to expulsion from the college. You should speak with your professors if you need clarification about any of these policies.**