

**Instructor: Dr. Jennifer Larimore**

**Website:** ilovebrains.org **LinkedIn:** Jennifer Larimore **Email:**jlarimore@agnesscott.edu **Office hours:** By appointment.

**Class: BSC 210 East**

Tuesday & Thursday 11:40 -12:55

**Required Text and Materials:**

1. Medical Neurobiology. Peggy Mason 2nd Edition. Oxford University Press
2. Neuroscience Basics. Larimore. 1st Edition. Academic Press

Email: Instructors will make announcements regularly via email. **It is your responsibility to check your Agnes Scott email account daily.** When responding to a professor via email, take care that your email is professional.

Canvas and Google Calendar:You can access the calendar in Canvas. And that calendar can be shared with your Google Calendar. There is a discussion board where you can use the class to answer questions or get in touch with the professor. The modules contain each of the pieces of the course. The syllabus item lets you see this syllabus and the schedule.

Technology: Cell phones should be in the silence mode prior to entering the classroom or lab. They should not be out/visible during class time. IF you are on your phone, you will be asked to leave.

**SYLLABUS OUTLINE:**

1. Course Description and Textbook
2. Success Plan
3. Course and Skill Objectives (what you gain from the course)
4. Grade Breakdown
5. Course Overview
   1. Reading
   2. Lectures
   3. Study Guides
   4. Tests
   5. Article presentation
   6. the Final Project and Outline
6. Academic Honesty
7. Class Management

**1. COURSE DESCRIPTION:**

This course examines foundational principles in cellular neuroscience. This includes the electrophysiological nature of neuronal cells, their structure and function, and the various extracellular and intracellular messages used to communicate in the nervous system.

**2. SUCCESS PLAN**:

Purpose and Plan: What purpose does this class serve for you? What are your personal goals for this class? What will it take to achieve these goals?

Why are these goals important to you? You need to be able to answer these questions for each class you take – because the work will get hard and you will need to remind yourself what you are aiming for at the end of the semester.

Good Habits: Learning throughout the semester: Preparing for tests and actually learning the material is made infinitely easier and more enjoyable if you establish an organized system for approaching the lecture and reading material early on in the semester. You should review the lecture material for at least 1 hour every day.

SCHEDULE time and STICK to it: Based on assignments for both lecture and lab, you will spend 8-10 hours (roughly 1.5 hours a day) studying for this class outside of class time. Please come see your instructor early in the semester if you are struggling.

**3. COURSE OBJECTIVES AND SKILL OBJECTIVES**

Upon successful completion of this course, the student will achieve the following objectives:

* Demonstrate knowledge of the structure and function of the different types of cells in the nervous system
* Demonstrate understanding of the electrophysiological nature of neurons.
* Design an experiment, analyze the results, draw conclusions, and report on the research both with scientific writing and an oral presentation.
* Critically read and evaluate primary scientific literature.
* Utilize effective teamwork to problem solve in an inquiry-based research laboratory project.

Skill Objectives:

Skills you will gain from this course that advance your development as a scientist (and you SHOULD add CV and personal statements). When professors have to submit letters of recommendation, we are also asked to rate students on each of the following. As such, you should ALWAYS provide evidence (do not simply state you have these skills) that you have mastered these skills from this class and other classes.

1. Critical thinking/Problem Solving – through weekly article analysis, students will be able to critically read and evaluate scientific literature. Through designing experiments and inquiry-driven laboratory experiences, students will sharpen their ability to think critically about neuroscience. These are assignments you can discuss in your personal statement as examples of your ability to solve problems.
2. Oral Communication – through article presentations, students will demonstrate their abilities to present scientific findings to a broad audience – again, assignments that serves as evidence that you can communicate science effectively.
3. Written Communication – through weekly assignments and the final project, students will demonstrate their ability to write scientifically - audience – again, assignments that serves as evidence that you can communicate science effectively.
4. Teamwork/Collaboration – working with a lab team as well as a team for presentations will enable the students to practice real-world teamwork and leadership competencies that are taught as a part of SUMMIT. Whatever your career is in the future, you will be part of a team.
5. Digital Technology – students will learn how to navigate various online resources to complete assignments and collaborate with peers. Students will actively use CITI, Canvas, PubMed, Google Drive, behavior analysis software, stats analysis software, etc. On your software list on your CV or resume, you can list CITI training, behavior analysis and stats software.
6. Research Skills – as a result of this course, students can design an experiment, analyze the results, draw conclusions, and report on the research both with scientific writing and an oral presentation. The laboratory portion of this course is designed to enhance the learning in the lecture as well as progress the career of each student as a scientist. This experience is huge and sets you apart from a lot of other students. You need to capture this experience as its own paragraph in your personal statement.

Example CV Entry from this class:

*Researcher, Neuroscience Program*

*Agnes Scott College, mentor (INSERT LAB INSTRUCTOR HERE)*

*August – December 2022*

Working with a diverse group of researchers, we developed a unique hypothesis based on our review of primary literature. We examined the role of (INSERT YOUR VARIABLE) on (INSERT YOUR BEHAVIOR) in a crayfish model system. Using statistics, we analyzed the results and reported these results on a poster. The poster was presented in a college symposium.

Additionally, you will have a poster presentation section. To that section, put any posters you have presented anywhere – SpARC, Scotties with Nerves, or the Fall Symposium. Include the poster you will present for this class and put December 2022 as the date.

**4. GRADING AND DEADLINES**

Deadlines: 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.

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.

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

| **LECTURE GRADE:** |  |
| --- | --- |
| Exams | 100 points (50 points each x 2 tests) |
| Outline for Final Project | 20 points |
| Class Final Project Draft | 30 points |
| Class Final Project | 100 points |
| Article Presentations | 20 points |
| Lecture Concept Maps | 220 points (20 points each x 11) |
| Reading Quizzes | 50 points (5 points each x 10 – there are 11, dropping the lowest) |
| Article Quizzes | 40 points (5 points each x 8 ) |

\*Additional points or assignments may be added by the instructors

The following grading scale will apply for converting numerical grades into final letter grades:

93 to 100: A, 90 to 92.9: A-, 87 to 89.9: B+, 83 to 86.9: B, 80 to 82.9: B-, 77 to 79.9: C+, 73 to 76.9: C, 70 to 72.9: C-, 67 to 69.9: D+, 63 to 66.9: D, 60 to 62.9: D-, Lower than 60: F

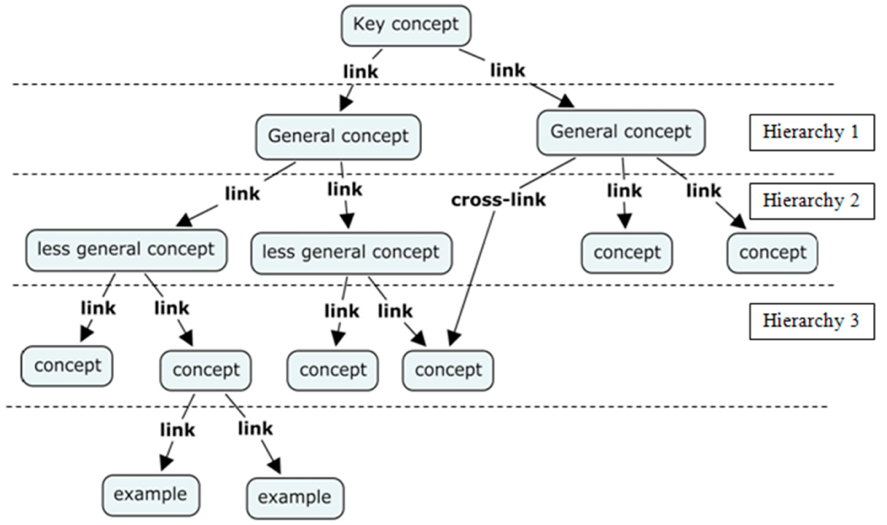
**5. COURSE OVERVIEW:**

**a. Reading:** There will be chapter reading and an article assigned for each topic. READ the chapter and take notes on the chapter BEFORE the lecture on that chapter. There is a reading quiz that is open note (hand written notes only) BEFORE the lecture on that chapter.

A peer-reviewed article from primary literature will be assigned every week (see Canvas for articles) and that article will be discussed during a student presentation.

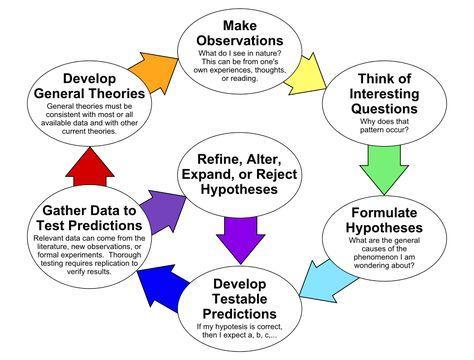
*During the article presentation, if you are engaged in anything other than paying attention to the article analysis, you will receive a 0 on your article quiz. It is expected that you pay attention, engage and learn from the group presenting.*

At the end of some article presentations later in the semester, we will be breaking into the assigned presentation groups. If you are reading this sentence before the start of the first day of class, then congrats to you on actually reading and not skimming your syllabus. As a reward, I will grant you 2 bonus points. To get these 2 bonus points, email me a picture of your favorite animal. Each group will turn in an experiment at the end of class that takes the article one step further, with a hypothesis, model system, control variables and experimental variables clearly defined.

**b. Lectures:**Open the lecture file and create an outline for note taking before coming to class. Add notes from the chapter. And bring those notes to class for the reading quiz. 

**c. Lecture Concept Maps:** They function as review questions for each chapter and can assist you in learning the information covered in the lecture. Due date time is on Canvas.

Concept maps are a type of graphic organizer that can help you make sense of difficult topics.

Concept maps are visual representations of information. They can take the form of charts, graphic organizers, tables, flowcharts, Venn Diagrams, timelines, or T-charts.

This semester, for each lecture, you will construct a concept map that illustrates the major properties, functions and examples of each topic. This includes the lecture material, the book, and the assigned article for that topic. See the schedule on Canvas to ensure you have all the assigned readings for a topic. See the rubric below for the grading.

You can use your book and other resources to create a comprehensive graphic, that contains details and sketches.

There are many websites that allow you to create concept maps.

Here are a few:

[**https://slidesgo.com/slidesgo-school/google-slides-tutorials/how-to-make-a-concept-map-in-google-slides**](https://slidesgo.com/slidesgo-school/google-slides-tutorials/how-to-make-a-concept-map-in-google-slides)

[**https://www.lucidchart.com/pages/concept-map**](https://www.lucidchart.com/pages/concept-map)

**d. Exams (see schedule for tentative dates):**There will be 2 exams during the semester. The exams will be written to assess your understanding of the information covered in class and your ability to apply and analyze the information using higher order thinking skills by answering short answer and essay questions.Your ability to design an experiment and/or critically analyzed data will also be assessed.

**e. Group Article Presentations**: The group preparing the article presentation will need to create a PPT, keynote, or Google Slides (no Prezi). Read the instructions below very carefully before your group begins putting together your presentation.

The groups are assigned on Canvas. If you go to our page, and click on the “people” menu, you can access the groups. On the first day of class, your group will meet and create a Google Chat strand with each group member and the professor. This chat will be the way in which everyone communicates regarding the class and group assignments. On the first day of class, your group will add the following information to your chat:

*1. What days/times (specifics) will you meet for your presentation? Remember everyone is busy outside of class, so be respectful. Create google calendar events and add the professor.*

*2. What is expected of each group member for each of those group meetings?*

*3. What is your assigned article?*

The presentation must be 25 – 35 minutes. Points will be taken off if it is too short or too long.

EACH member of the group must present at least 1 figure. If there are less results figures than there are group members, then use a figure from one of the sources cited in the introduction or conclusion to explain why the data is important or necessary. AND/OR look to show what research has happened since the article was published and present a figure from more current work.

\*\* Each Member MUST submit a PDF of THEIR slides (NOT THE WHOLE PRESENTATION) for grading 24 hours prior to the presentation – there is a spot on Canvas. Points will be taken off if slides are not submitted 24 hours prior to the presentation.

**ANY information on your slide is FAIR GAME for a question. If you put it on a slide, BE ABLE TO EXPLAIN IT!!**

**We will take off points if you cannot explain something on your slide.**

Presentation Tips:

* Less text is better and diagrams are always helpful
* keep the ALL information relevant
* if it’s boring to you, it’s boring to your audience
* Do not make the presentation “cutesy”. This is a scientific presentation to your colleagues. Keep it professional.
* Make sure the fonts are the same on all slides, as well as all bullets. Formatting should be cohesive and look like 1 person made the presentation.
* The sharpest contrast between font and background is black and white. It makes your words more legible from the back of the room.
* In past years, group members have gained insight and bettered their understanding by meeting with the professor a week or two before the presentation. Do not expect the professor to meet with you outside of office hours the week of the presentation.

A rubric with the grading criteria and breakdown of points is on Canvas.

Your presentation will include the following information (but not limited to these sections if you have additional sections you think might be helpful):

**Introduction section –** Provide background information to help our class understand your topic.

*Why is this experiment important?*

*How does this research impact society?*

*What background information will help us understand what was done (reference the papers cited in the introduction)?*

Be sure to clearly state the hypothesis and/or experimental question of the article.

\*\*Sometimes a picture or an infographic is more useful than bullet points.

\*\* Do not have a text heavy slide. Do not have blank space on the slide.

\*\*Anything on the slide is fair game for questions.

**Results –** Each piece of the results (data) presented must cover the 3 points below or points will be taken off. Any time you present a piece of data, always explain

(1) what the audience is looking at (walk us through the pieces)

(2) what method you used (if the method is new to the class, explain it in a clear way, potentially using videos or graphics), and

(3) what the data mean (your interpretation) and why they are important.

Be sure to include a figure legend and a descriptive figure title for each.

\*\* Do not label figure/results slides with the title as “Figure 1”. Gives us a more descriptive title like “Does sleep quality impact learning and memory?”.

**Conclusions –** Include simple statements to describe the key takeaway points from the experiments and their importance in the field of study. This is a summary of the results section, but it is necessary to remind everyone.

*How did the study contribute to the hypothesis?*

*How does this data impact society?*

Remind the audience why this research was important to the field of study.

**Feedback from the professors after the presentation in front of the class**

The professors will **heavily** critique each presentation. This is done with all the respect of an individual presenting and for the benefit of the individual.

This is a safe space to grow and only through this constructive criticism can any scientist grow.

While the professor’s critique in this manner may come across as harsh, this is not the intention and should not be taken personally, as our critique does not reflect our opinion of you.

This may be the first time many are presenting scientific data, and we are fully aware and respect that.

Our critiques are meant to aid an individual in becoming the best scientist they can. They are hard critiques that put a student on the spot and may point out a lack of preparation or a lack of understanding.

If we did not care about the success, we would not aid students prior to the presentation or have this assignment at all. Feedback in the real world could mean not getting the school or job a student wants.

The feedback given in this assignment is done in a professional manner. We ask questions about the project.

Meeting with the professor before and following through with advice and feedback is the easiest way to prepare for the presentations.

**f. Class Final Project:** For the final in this class, you will be completing a paper that integrates the information you have learned in this class under a Neuroscience theme.

**The goal of this project is to be able to make connections between the major concepts from these courses.**

* The professors will assign the themes of this final project.
* Each topic should be fully explained as to how it relates to your theme.
* It is expected that your document will be well written and well organized.
* Be sure to properly cite any literature used to construct your document in the formatting style for review papers in the Journal of Neuroscience.
* This will be submitted as a Word Doc.
* For citations - only review articles and primary literature. Word count is 2750 words - 3250 words and must be on the title page.

**The outline must include the following sections (20 points):**

1. Introduction
2. Genetics and Mutations
3. Subcellular Organelles
4. AP and Ion Channels
5. Neurotransmitters and Release
6. Current advancements
7. Conclusion

Each of the sections in the outline must contain 5 bullet points with information you are going to include in the final paper. Sections 2-6 can be rearranged in a different order if that makes more sense for your topic.

**Grading Rubric for Outline:**

| **Section** | **0 points** | **1-2 point** | **2-3 points** |
| --- | --- | --- | --- |
| **Introduction** | Bullet points do not demonstrate mastery of the material and organizing necessary information | Bullet points demonstrate some mastery of the material and some organization of the necessary information | Bullet points demonstrate mastery of the material and organization of the necessary information |
| **Genetics and Mutations** | Bullet points do not demonstrate mastery of the material and organizing necessary information | Bullet points demonstrate some mastery of the material and some organization of the necessary information | Bullet points demonstrate mastery of the material and organization of the necessary information |
| **Subcellular Organelles** | Bullet points do not demonstrate mastery of the material and organizing necessary information | Bullet points demonstrate some mastery of the material and some organization of the necessary information | Bullet points demonstrate mastery of the material and organization of the necessary information |
| **AP and Ion Channels** | Bullet points do not demonstrate mastery of the material and organizing necessary information | Bullet points demonstrate some mastery of the material and some organization of the necessary information | Bullet points demonstrate mastery of the material and organization of the necessary information |
| **Neurotransmitters and nt release** | Bullet points do not demonstrate mastery of the material and organizing necessary information | Bullet points demonstrate some mastery of the material and some organization of the necessary information | Bullet points demonstrate mastery of the material and organization of the necessary information |
| **Current Advancements** | Bullet points do not demonstrate mastery of the material and organizing necessary information | Bullet points demonstrate some mastery of the material and some organization of the necessary information | Bullet points demonstrate mastery of the material and organization of the necessary information |
| **Conclusion** | Bullet points do not demonstrate mastery of the material and organizing necessary information | Bullet points demonstrate some mastery of the material and some organization of the necessary information | Bullet points demonstrate mastery of the material and organization of the necessary information |

**Final Project Draft Review (30 points):**

Your first draft (draft #1 for professor review) should incorporate feedback from the outline.

You will load your second rough draft for peer review on 11/25. After you upload it, Canvas will assign peer-reviewers to offer feedback. The professors will monitor the assignment to ensure everyone has posted thoughtful, constructive reviews with advice on improvement. Once all reviews are posted, grades for uploading the draft will be assigned.

|  | ***0 points*** | ***1 points*** | ***2 points*** | ***3 points*** |
| --- | --- | --- | --- | --- |
| **Introduction** | Paper lacks a sufficient introduction to the topics and shows no mastery of the material. | Paper has some introduction, but not properly integrated. Some mastery of the information is evident. | Paper has most of the material for the introduction and is mostly integrated. Mastery of the material is mostly present. | Paper has an introduction that contains sufficient material that is properly integrated. Mastery of the information is evident. |
| **Genetics and mutations** | Section does not contain appropriate knowledge or integration to the theme. No mastery of the subject is evident. | Section has some knowledge of the topic and some integration to the theme. Some mastery of the information is evident. | Section contains most of the knowledge for the topic and most of the integration of the them. Mastery of the material is mostly present. | Section contains necessary knowledge and integration of knowledge to the theme. Mastery of the information is evident, |
| **Subcellular Organelles** | Section does not contain appropriate knowledge or integration to the theme. No mastery of the subject is evident. | Section has some knowledge of the topic and some integration to the theme. Some mastery of the information is evident. | Section contains most of the knowledge for the topic and most of the integration of the them. Mastery of the material is mostly present. | Section contains necessary knowledge and integration of knowledge to the theme. Mastery of the information is evident, |
| **AP and Ion Channels** | Section does not contain appropriate knowledge or integration to the theme. No mastery of the subject is evident. | Section has some knowledge of the topic and some integration to the theme. Some mastery of the information is evident. | Section contains most of the knowledge for the topic and most of the integration of the them. Mastery of the material is mostly present. | Section contains necessary knowledge and integration of knowledge to the theme. Mastery of the information is evident, |
| **Neurotransmitters and NT release** | Section does not contain appropriate knowledge or integration to the theme. No mastery of the subject is evident. | Section has some knowledge of the topic and some integration to the theme. Some mastery of the information is evident. | Section contains most of the knowledge for the topic and most of the integration of the them. Mastery of the material is mostly present. | Section contains necessary knowledge and integration of knowledge to the theme. Mastery of the information is evident, |
| **Current Advancements** | Section does not contain appropriate knowledge or integration to the theme. No mastery of the subject is evident. | Section has some knowledge of the topic and some integration to the theme. Some mastery of the information is evident. | Section contains most of the knowledge for the topic and most of the integration of the them. Mastery of the material is mostly present. | Section contains necessary knowledge and integration of knowledge to the theme. Mastery of the information is evident, |
| **Conclusions** | Paper lacks a sufficient conclusion to the topics and shows no mastery of the material. | Paper has some conclusion, but not properly integrated. Some mastery of the material is evident. | Paper has most of the conclusion necessary and it is mostly integrated. Mastery of the material is mostly present. | Paper has a conclusion that contains sufficient material that is properly integrated. Mastery of the material is evident. |
| **Grammar/Spelling** | Poor Grammar and spelling. | Some Grammar and spelling errors. | Very few grammar and spelling errors | No grammar or spelling errors |
| **Formatting** | Proper formatting was not followed | Proper formatting was followed most of the time | Proper formatting was followed. |  |
|  | ***0 points*** | ***1 points*** | ***2 points*** |  |
| **Overall Cohesion/Flow of the paper** | The paper was choppy and did not flow. | The paper flowed/was cohesive most of the time. | The paper was cohesive. |  |
|  | ***0 points*** | ***1 points*** | ***2 points*** |  |

**Final Project : (100 points)**

**Final Project Grading Rubric:**

|  | ***0 points*** | ***2 points*** | ***5 points*** | ***10 points*** |
| --- | --- | --- | --- | --- |
| **Introduction** | Paper lacks a sufficient introduction to the topics and shows no mastery of the material. | Paper has some introduction, but not properly integrated. Some mastery of the information is evident. | Paper has most of the material for the introduction and is mostly integrated. Mastery of the material is mostly present. | Paper has an introduction that contains sufficient material that is properly integrated. Mastery of the information is evident. |
| **Genetics and mutations** | Section does not contain appropriate knowledge or integration to the theme. No mastery of the subject is evident. | Section has some knowledge of the topic and some integration to the theme. Some mastery of the information is evident. | Section contains most of the knowledge for the topic and most of the integration of the them. Mastery of the material is mostly present. | Section contains necessary knowledge and integration of knowledge to the theme. Mastery of the information is evident, |
| **Subcellular Organelles** | Section does not contain appropriate knowledge or integration to the theme. No mastery of the subject is evident. | Section has some knowledge of the topic and some integration to the theme. Some mastery of the information is evident. | Section contains most of the knowledge for the topic and most of the integration of the them. Mastery of the material is mostly present. | Section contains necessary knowledge and integration of knowledge to the theme. Mastery of the information is evident, |
| **Action Potential and Ion Channels** | Section does not contain appropriate knowledge or integration to the theme. No mastery of the subject is evident. | Section has some knowledge of the topic and some integration to the theme. Some mastery of the information is evident. | Section contains most of the knowledge for the topic and most of the integration of the them. Mastery of the material is mostly present. | Section contains necessary knowledge and integration of knowledge to the theme. Mastery of the information is evident, |
| **Neurotransmitters and nt release** | Section does not contain appropriate knowledge or integration to the theme. No mastery of the subject is evident. | Section has some knowledge of the topic and some integration to the theme. Some mastery of the information is evident. | Section contains most of the knowledge for the topic and most of the integration of the them. Mastery of the material is mostly present. | Section contains necessary knowledge and integration of knowledge to the theme. Mastery of the information is evident, |
| **Current Advancements** | Section does not contain appropriate knowledge or integration to the theme. No mastery of the subject is evident. | Section has some knowledge of the topic and some integration to the theme. Some mastery of the information is evident. | Section contains most of the knowledge for the topic and most of the integration of the them. Mastery of the material is mostly present. | Section contains necessary knowledge and integration of knowledge to the theme. Mastery of the information is evident, |
| **Conclusions** | Paper lacks a sufficient conclusion to the topics and shows no mastery of the material. | Paper has some conclusion, but not properly integrated. Some mastery of the material is evident. | Paper has most of the conclusion necessary and it is mostly integrated. Mastery of the material is mostly present. | Paper has a conclusion that contains sufficient material that is properly integrated. Mastery of the material is evident. |
| **Grammar/Spelling** | Poor Grammar and spelling. | Some Grammar and spelling errors. | Very few grammar and spelling errors | No grammar or spelling errors |
| **Formatting** | Proper formatting was not followed | Proper formatting was followed most of the time | Proper formatting was followed. |  |
|  | ***0points*** | ***7points*** | ***10points*** |  |
| **Overall Cohesion/Flow of the paper** | The paper was choppy and did not flow. | The paper flowed/was cohesive most of the time. | The paper was cohesive. |  |
|  | ***0points*** | ***7points*** | ***10points*** |  |

**6. ACADEMIC HONESTY FOR YOUR WORK AS A SCIENTIST:**

You are responsible. Review each course syllabus for the professor’s expectations regarding course work and class attendance. Violations of the honor code will result from failure of the assignment, failure of the course, to expulsion from the college. You should 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 have to learn this material in order to succeed in science.

*Academic dishonesty is reported to medical schools and graduate schools as per their request.*

*Anyone caught cheating relinquishes the privilege of asking for a letter of recommendation from the professor 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 and 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 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.

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.

**7. CLASS MANAGEMENT:**

**Course evaluations:** At the end of the semester you will receive an email 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.

**Course Accessibility and Academic Accommodations.** Agnes Scott College views disabilities as an integral part of the rich diversity of our community and strives to make all learning experiences as accessible as possible.  If you are a student who receives academic accommodations through the Office of Accessible Education, please schedule a meeting with your instructor within the first two weeks of classes to discuss how your accommodations will be implemented for this course.  During this meeting, you are not expected to disclose any details concerning your disability, though you may discuss these details at your discretion.

**Title IX:** Agnes Scott is here to help you if you have experienced any form of sexual harassment or violence, dating or domestic violence, or stalking. Please talk to any faculty or staff member with whom you feel comfortable. Faculty and staff members want to support you and have been trained to help. They will also inform the Title IX office so that you learn about options available to you. If you do not want college administrators to know what you have experienced, you may talk to the chaplain, as well as nurses or counselors in the Wellness Center with complete confidentiality. They will not tell anyone what you share with them unless you give your express permission.  You may contact the Title IX Coordinator directly at [T9Coordinator@agnesscott.edu](mailto:T9Coordinator@agnesscott.edu).

**Inclusion:** Please include this statement or a version of it in your syllabus. Agnes Scott is a diverse and inclusive community. “As one of the most diverse colleges in the nation, ASC is ideally positioned to be the model of a diverse and inclusive community that society can aspire to be. Such diversity raises the intellectual quality of the classroom experience, creating a unique environment for learning to understand and navigate the challenges of our times. By studying, living, and playing together, Agnes Scott College’s remarkably diverse student body hones the habits of mind, skills, and knowledge essential to ethical and innovative leadership in our increasingly heterogeneous and global society.  As such, this course adheres to the principles of diversity and inclusion as integral to the Agnes Scott community and respects people from all backgrounds. As a first step, this course affirms people’s decisions about gender expression and identity and will use each other’s preferred names and gender pronouns at all times.

**Content warning:** This course will explore cell biology, genetics, ecology and evolution, 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.

| Date | **Class Topic and Lecture** | **Homework (To complete BEFORE class)** |
| --- | --- | --- |
| TR 8/25 | **Syllabus**  - in class group work | Syllabus Article on CVs (CV template and The CV docs on Canvas) Article on Personal statements (2 docs, and Appleby article) |
| T 8/30 | **presentation work**  -group will meet to begin laying out the slides and material for your presentation - in class group work on the study guide | [Watch the 2 presentations Kehav et.al. http://blizzard.cs.uwaterloo.ca/keshav/home/Papers/data/07/paper-reading.pdf Subramanyam 2013 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3687192/ read your group’s assigned article for presentation](http://blizzard.cs.uwaterloo.ca/keshav/home/Papers/data/07/paper-reading.pdf) |
| TH 9/1 | 1. **Neuro History and Techniques** - reading quiz (open notes/ handwritten notes only) -Lecture -In Lecture Assignments | Listen to: <https://youtu.be/jmD0LBdAvlE>  [Lecture PPT Chapter 1 in Mason. Chapter 7 in Larimore Brown et.al 2019 https://pubmed.ncbi.nlm.nih.gov/31191266/](https://pubmed.ncbi.nlm.nih.gov/31191266/) |
| F 9/2 | *Concept Map of Lecture 1 and it’s assigned reading materials due* |  |
| T 9/6 | 2. **Cells of the Nervous system** - reading quiz (open notes/ handwritten notes only)  -Lecture -In Lecture Assignments | Listen to: <https://youtu.be/1h4kW8RX-6k>  And to : <https://youtu.be/L82bDTBMGUU>  And to: <https://youtu.be/iqf3ft0mh1M>  Lecture PPT Chapter 2 pages in Mason Chapter 2 in Larimore |
| TH 9/8 | [**Student Article Presentations #1** Bendesky et al 2017 https://www.nature.com/articles/nature22074 - Technique and Article Discussions - article quiz (open article/ open handwritten notes)](https://www.nature.com/articles/nature22074) | [Bendesky et al 2017 https://www.nature.com/articles/nature22074](https://www.nature.com/articles/nature22074) |
| F 9/9 | *Concept Map of Lecture 2 and it’s assigned reading materials due* |  |
| T 9/13 | 3. **Development and Central Neuroanatomy** - reading quiz (open notes/ handwritten notes only) - Lecture -In Lecture Assignments | Listen to: <https://youtu.be/dAOWQC-OBv0> and to: <https://youtu.be/DtkRGbTp1s8>  Lecture PPT Chapter 3 in Mason. Chapter 1 in Larimore |
| TH 9/15 | [**Student Article Presentations #2** Compere et al 2021,https://pubmed.ncbi.nlm.nih.gov/33127480/  - Technique and Article Discussions - article quiz (open article/ open handwritten notes)](https://pubmed.ncbi.nlm.nih.gov/33127480/) | [Compere et al 2021,https://pubmed.ncbi.nlm.nih.gov/33127480/](https://pubmed.ncbi.nlm.nih.gov/33127480/) |
| F 9/16 | *Concept Map of Lecture 3 and it’s assigned reading materials due* |  |
| T 9/20 | 4. **Spinal Cord and Cranial Nerves** - reading quiz (open notes/ handwritten notes only) -Lecture -In Lecture Assignments | Listen to: <https://youtu.be/GJBnwZQ60Ss>  Lecture PPT Chapter4 and 5 in Mason |
| TH 9/22 | **Project work** -you will work on an outline of your final project. | Your outline is due at the end of class. See the syllabus or Canvas for a Rubric. |
| F 9/23 | *Concept Map of Lecture 4 and it’s assigned reading materials due* |  |
| T 9/27 | [**Student Article Presentations #3**  Sengelaub et al 2018. https://pubmed.ncbi.nlm.nih.gov/29132243/  - Technique and Article Discussions - article quiz (open article/ open handwritten notes)](https://pubmed.ncbi.nlm.nih.gov/29132243/) | [Sengelaub et al 2018. https://pubmed.ncbi.nlm.nih.gov/29132243/](https://pubmed.ncbi.nlm.nih.gov/29132243/) |
| TH 9/29 | 5. **Brainstem and Forebrain** - reading quiz (open notes/ handwritten notes only) -Lecture -In Lecture Assignments | Listen to: <https://youtu.be/A_2f3onF3S8>  Listen to: <https://youtu.be/MxDP1B5mKWA>  Lecture PPT Chapter 6 and 7 in Mason |
| *F 9/30* | *Concept Map of Lecture 5 and it’s assigned reading materials due* |  |
| *T 10/4* | [**Student Article Presentations #4**  Jiang et al 2021. https://pubmed.ncbi.nlm.nih.gov/33359350/ - Technique and Article Discussions - article quiz (open article/ open handwritten notes)](https://pubmed.ncbi.nlm.nih.gov/33359350/) | [Jiang et al 2021. https://pubmed.ncbi.nlm.nih.gov/33359350/](https://pubmed.ncbi.nlm.nih.gov/33359350/) |
| *TR 10/6* | *Fall Break – No Classes* | *Fall Break – No Classes* |
| T 10/11 | 6. **BBB, ventricles and blood supply**  - reading quiz (open notes/ handwritten notes only)  Lecture -In Lecture Assignments | Listen to : <https://youtu.be/sErtRyeltk4> and to <https://youtu.be/MECTtnyS0NY>  Lecture PPT Chapter 8 in Mason |
| TR 10/13 | **Career Management**  - CV/ Personal Statement Day - bring a hard copy of your CV or resume AND your personal statement THAT INCLUDE THIS CLASS | - each person will comment on 2 other students CV and personal statements (quality of feedback will be reflected in the points earned in class)  - you will incorporate the feedback in your own drafts and upload the new drafts at the end of class - upload Final drafts that include this class |
| F 10/14 | *Concept Map of Lecture 6 and it’s assigned reading materials due* |  |
| T 10/18 | **Test #1 on**  **Chapters 1- 8 (Lectures 1 – 6)** |  |
| TH 10/20 | 7. **The Neuron at Rest**  - reading quiz (open notes/ handwritten notes only)  -Lecture -In Lecture Assignments | Listen to: <https://youtu.be/4htSVI5E9AQ>  Lecture PPT Chapter 9 in Mason Chapter 5 in Larimore |
| F 10/21 | *Concept Map of Lecture 7 and it’s assigned reading materials due* |  |
| T 10/25 | 8. **Electrical Communication** - reading quiz (open notes/ handwritten notes only) -Lecture -In Lecture Assignments | Listen to: <https://youtu.be/kY8FEq0teOs>  Lecture PPT Chapter 10 in Mason |
| TH 10/27 | [**Student Article Presentations #5**  Niibori et al 2020. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7087406/  - Technique and Article Discussions - Design an Experiment in class activity - article quiz (open article/ open handwritten notes)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7087406/) | [Niibori et al 2020. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7087406/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7087406/) |
| F 10/28 | *Concept Map of Lecture 8 and it’s assigned reading materials due* |  |
| T 11/1 | 9. **Transmitter Release** - reading quiz (open notes/ handwritten notes only) -Lecture -In Lecture Assignments | Listen: <https://youtu.be/Ac-Npt3vgCE>  Lecture PPT Chapter 11 in Mason Chapter 3 in Larimore |
| TH 11/3 | [**Student Article Presentations #6** Thompson Gray et al https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7520068/ - Technique and Article Discussions - Design an Experiment in class activity - article quiz (open article/ open handwritten notes)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7520068/) | [Thompson Gray et al https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7520068/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7520068/) |
| F 11/4 | *Concept Map of Lecture 9 and it’s assigned reading materials due* | Rough Draft #1 of the Final Project Due |
| T 11/8 | 10. **Neurotransmitters**  - reading quiz (open notes/ handwritten notes only) -Lecture -In Lecture Assignments | Read: Lecture PPT Read: Chapter 12 in Mason  Listen to: <https://youtu.be/FXYX_ksRwIk> |
| TH 11/10 | 11. **Receiving the Message**  - reading quiz (open notes/ handwritten notes only) -Lecture -In Lecture Assignments | Listen to: <https://youtu.be/Tbq-KZaXiL4>  Lecture PPT Chapter 13 in Mason Chapter 4 in Larimore |
| F 11/11 | *Concept Map of Lecture 10 and 11 and it’s assigned reading materials due* |  |
| T 11/15 | **Project work and Peer Review**  -you will review other’s project drafts and assigned points based on the quality of your feedback |  |
| TH 11/17 | [**Student Article Presentations #7** Kawabata-Sakata et al 2020. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7341908/ - Technique and Article Discussions - Design an Experiment in class activity - article quiz (open article/ open handwritten notes)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7341908/) | [Kawabata-Sakata et al 2020. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7341908/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7341908/) |
| 11/22 – 27 | *No Class – Thanksgiving Break* | *No Class – Thanksgiving Break* |
| T 11/29 | **TEST #2** | **TEST #2** |
| TH 12/1 | [**Student Article Presentations #8** Zhao et al 2021. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7811170/- Technique and Article Discussions - Design an Experiment in class activity - article quiz (open article/ open handwritten notes)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7811170/) | [Zhao et al 2021. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7811170/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7811170/) |
| M 12/5 | Final Project Due (no extensions) |  |
| T 12/6 | *Reading Day* | *Reading Day* |
| 12/7 – 12/12 | *Exams* | *Exams* |