

UNIVERSITY OF FLORIDA
COLLEGE OF MEDICINE SYLLABUS
NEUROSCIENCE

GMS6007 Fundamentals of Neuroscience (3 credit hours)

Semester: Fall and Spring

Delivery Format: Online

Instructor Name: Susan Semple-Rowland

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Email Address: rowland@ufl.edu

Office Hours: Arranged by student request

Graduate Assistant: N/A

Preferred Course Communications: Email through Canvas

Prerequisites: GMS 6001 or consent of instructor. Designed for graduate students in MSc or PhD programs and Biomedical Graduate Certificate students.

Course Overview

Fundamentals of Neuroscience (GMS6007) covers the basic background required to understand current topics in the field of Neuroscience, a rapidly changing area that impacts several fields of medicine including public health, public policy, and sports medicine, as well as on the military and the pharmaceutical industry. This course is organized into ten modules, each of which covers a key area of Neuroscience. Each module includes a Beyond the Basics unit that ties the basic information covered in the module to relevant problems and exciting new developments in the Neurosciences. My goal is to help you obtain a working knowledge of the field of Neuroscience that will allow you to appreciate the significance of emerging findings in this field and enable you to pursue more in-depth studies of specific Neuroscience topics.

Relation to Program Outcomes

This course is the foundational Neuroscience course for both the online Biomedical Neuroscience Graduate Certificate and Master of Science programs. Post-baccalaureate students, MSc and PhD graduate students, and working professionals who are interested in improving their understanding of how biological clocks impact normal and diseased brain function are also encouraged to enroll in this course. Interested advanced undergraduate students may inquire about registration.

Course Objectives and Goals

Neuroscience is the science of how the nervous system functions, and is the basis for understanding nearly all aspects of modern medicine and the biomedical research sciences.

Upon completion of this course students will be able to:

- Describe and discuss the basic anatomy, organization, and cells that make up the central nervous system
- Compare the anatomy and functions of the primary sensory (taste, olfaction, audition, vision) and motor systems
- Describe the functions of higher order Neuroscience systems including those controlling language, cognition, and memory.
- Describe the early stages of nervous system development

Instructional Methods

This is an online asynchronous course that has been created using CANVAS, an online course management system. The course is divided into 10 modules each comprised of 3-7 units. One module is completed a week. Each unit contains a short VoiceThread lecture, assigned readings taken from an online textbook as well as from the primary scientific literature, and a self-check quiz. All lectures are delivered using VoiceThread, an asynchronous application that allows students to post questions on individual slides and view the slides within the lectures multiple times either using a computer or using a cell phone app.

Student assessments consist of self-check quizzes, a Beyond-the-Basics assignment, two module tests, and two VoiceThread-based projects. The module Beyond-the-Basics assignments involve writing two short essays, one in which you write short essays in response to thought questions related to an assigned TedTalk and in some cases, peer-reviewed scientific papers. The two VoiceThread-based projects are completed mid-term and at the end of the semester.

The VoiceThread-based projects will be in-depth analyses of a specific scientific question that you generate that is related to the course materials. You will research this question, sum up key findings in the peer-reviewed literature, and generate a testable hypothesis based on your question and research. You will complete your project by reviewing a peer's project. Your final submitted projects will be evaluated using a grading rubric.

How to Succeed in this Online Course

First, you need to be aware that online learning poses its own unique challenges. Because the online classroom is available to you 24 hours a day it is easy to delay work on course material, forget deadlines, and not put enough time in to perform well on exams. These challenges are exacerbated when a student is not a 'self-starter' or if does not possess good time management skills including use of reminders.

Unlike traditional instructional settings in which each student goes to the same class, the online setting enables every student to “create” the class of his or her choosing. In theory, this type of instruction should be more adaptable to a variety of learning styles; however, the reality is that

some students have not yet determined what their optimal learning style is. Poor performance in online courses often can be directly linked to procrastination and poor time management (trying to do a week's worth of work just before the deadline). Rushing to complete assignments before the 11:59 pm deadlines on Sundays is NOT a good strategy because you forfeit your opportunity to ask questions about material you do not understand. Completing the self-check quizzes during the work week can help you to pinpoint problem areas. In general, we are able answer questions you have about course content within 12-24 hrs of your posting of your question. Oftentimes, we answer much more quickly. Questions posted on Sundays may not be answered before you take your exams that are due at 11:59 pm on Sunday.

You are expected to adhere to the posted assignment deadlines; however, you should note that the assignments, quizzes, and tests associated with each Module can be completed at your own pace over the course of each week. The self-check quizzes associated with each module are due throughout the week. You should pay special attention to these deadlines since extensions to complete these quizzes will NOT be made. It is possible to request a deadline extension, but requests must be submitted to the instructor and approved prior to the deadline. The tests associated with each Module are due by 11:59 pm each Sunday. Finally, for the Beyond-the-Basics assignments your answers to the Thought questions will be due on Wednesdays at 11:59 pm and your responses to your peer's answers will be due on Fridays at 11:59 pm.

Description of Course Content

COURSE TOPICS

Week	Topics
1	Course Introduction
2	General Features and Cells of the Nervous System
3	Neural Signaling
4	Synaptic Transmission
5	Chemical Senses
6	The Auditory System
7	The Visual System
8 & 9	VoiceThread Project 1
10	Motor Systems and Control
11	Language
12	Cognition and Memory
13	Development of the Nervous System
14	VoiceThread Project 2

Course Materials and Technology

Reading Materials

Readings materials associated with each module are assigned from the publically available online textbook **Neuroscience**. 2nd edition Purves, D, Augustine GJ, Fitzpatrick D, et al., editors. Sunderland (MA); Sinauer Associates; 2001. This book is provided for public access through PubMed Books. Students may elect to purchase more recent editions of this textbook. Additional readings augmenting the textbook are assigned from the primary research literature and links to the articles or downloadable pdfs are provided in the units.

Required Technology

- **Laptop or desktop computer equipped with microphone and video camera.** The microphone and video camera can be used to post comments/questions to VoiceThread and will be used to create the VoiceThread projects. There are VoiceThread apps that are available for free for iOS and Android devices that can be used to view the VT and comment on them. I strongly recommend that you use a laptop or desktop computer when working on your VT projects for this course.
- **High speed, broad band internet connection such as DSL or cable.** A broadband Internet connection is strongly recommended. Slower connections may affect your ability to interact with materials in the course. It is also recommended that you try to submit course exams and assignments well ahead of the deadline since we have found that network speeds can significantly slow as the deadline approaches due to increased use.
SPECIAL NOTE: Some users with satellite Internet service may find their online courses do not load quickly or consistently due to satellite network design issues.
- **Installation of LockDown Browser on computer that you will use for this course.** All quizzes and tests will be taken using LockDown Browser. The computer you use to take exams should be “hard wired” to the internet. WiFi is not stable enough to support a reliable connection.
- Canvas courses are best viewed using Chrome or Firefox. For specific questions about browser compatibilities and general questions about e-learning at UF please go to <https://wiki.helpdesk.ufl.edu/FAQs/E-Learning>.

For any technical issues you encounter with your course please contact the UF computing Help Desk at 352-392-4357. For Help Desk hours visit: <http://helpdesk.ufl.edu/>.

Academic Requirements and Grading

Assignments and Grading

The scores obtained for the self-check quizzes (31 quizzes), the Beyond-the-Basics writing assignments (9 assignments), and the Module tests (20 tests) are weighted as shown below to represent 65% of your course grade. The remaining 35% of your course grade will come from the two graded VoiceThread projects that you will complete midway through the course and at the end of the course.

Your quizzes and module tests will be graded automatically when submitted. Essay questions will be graded by me. Grading rubrics will be used to evaluate both the Beyond-the-Basics assignments and the VoiceThread projects. You will be given the rubrics ahead of time so that you will understand what is required to successfully complete these assignments and projects and how they will be evaluated.

The self-check quizzes are graded automatically so it is important that you view your results immediately after submitting these quizzes. If you believe that you did not receive credit for a question due to either a spelling error in the answer you entered or for another reason, send me an email using the Canvas email system and describe in your email the self-check quiz (unit #), the text of the question you are concerned about (do not just indicate question number, since they are scrambled for each student), and why you think you should receive credit for your answer. I will then evaluate your quiz and adjust your score if appropriate.

Students are expected to complete all assignments for one module each week. There will be no deadline extensions for completion of a module unless an extension is requested by the student and granted by me. Failure to submit a module assignment, quiz, or test by the course deadline will be recorded as a zero.

Weighting of Course Assignments

Unit Self-check quizzes – 5%	} -----	65% Final Grade
Beyond-the-Basics Assignments – 20%		
Module tests – 40%		
VoiceThread Projects (2 projects)		

GRADING SCALE

Percentage total points earned	Letter Grade	Grade Points
93-100	A	4.0
90-92	A-	3.67

87-89	B+	3.33
83-86	B	3.0
80-82	B-	2.67
77-79	C+	2.33
73-76	C	2.0
70-72	C-	1.67
67-69	D+	1.33
63-66	D	1.0
60-62	D-	0.67
Below 60	E	0.0

Please be aware that a C- is not an acceptable grade for graduate students. If you obtain a C- in a course, it may be possible for you to retake the course but your C- will remain part of your calculated cumulative GPA. To successfully complete the Biomedical Neuroscience Certificate or MSc programs you must have a cumulative final GPA of 3.00 or higher.

Additional information on UF grading policy may be found at:

<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#grades>

Exam Policy

Late assignments, quizzes and tests

I recognize that personal circumstances arise that may interfere with your ability to meet a deadline. If you anticipate missing a deadline, please let me know as soon as possible and I will work with you to resolve the issue. Your emails will be responded to within 24 hours (typically sooner). Please see the [UF Attendance Policies](#) concerning absences, religious holidays, and illness. In general, late assignments, quizzes, and tests will not be accepted unless you have obtained a deadline extension from the instructor.

If you encounter technical difficulties with assignments (e.g. LockDown browser malfunction), be sure to include a UF helpdesk ticket number (<http://helpdesk.ufl.edu/>) in your request for a deadline extension if you plan to request one. The extension request MUST be submitted within 24 hours of the technical difficulty.

Class Attendance Policy

This course is entirely online and is asynchronous. Thus there is no formal class attendance policy. Requirements for make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Excused absences that lead to missed assignment deadlines must be consistent with university policies in the Graduate Catalog

<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#attendance>.

Additional information can be found here:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Expectations Regarding Course Behavior

Communication Guidelines

WHEN DO I CONTACT THE UF HELPDESK?

In the event that you have **technical difficulties with E-learning**, please contact the UF helpdesk at learning-support@ufl.edu, or (352) 392-4357 - select option 2. If your technical difficulties will cause you to miss a due date, you **MUST** report the problem to E-learning. Include the ticket number that you are given in an e-mail to the instructor to explain the late assignment/quiz/test.

Types of questions that should be directed to the Help Desk:

1. I can't log into E-learning
2. I have clicked on the "submit" button for my quiz and nothing is happening
3. I can't upload an assignment (be sure that you have reviewed the tutorial on how to do this BEFORE you contact the Help Desk)
4. E-learning has given me an error message and I can't submit my assignment.

NOTE: Late work that involves technical difficulties with E-learning **MUST** be accompanied by a ticket number from the Help Desk.

ALSO - Be sure to be familiar with the hours of operation for the UF help desk since they are oftentimes not available after 10:30pm on workdays and after 8:00 pm on weekends. There hours are posted at <http://helpdesk.ufl.edu/about/business-hours/>

WHEN DO I POST QUESTIONS TO THE COURSE QUESTIONS DISCUSSION BOARD?

Questions that deal with the course itself should be submitted to the Course Questions board. Posted questions should NOT be about grades or a private matter. Do not post personal grade questions on the Course Questions discussion board.

Before posting a question, check those already posted to be sure that you are not duplicating a question. These should be things that other students in the class might have trouble with. For example:

1. I am unable to post comments to VoiceThread.
2. The link to Blendspace or a specific VoiceThread is not working.
3. One of the quiz questions did not display properly.

Posting on the Course questions board is the fastest way to get an answer to your question. Be sure to give it a meaningful heading!

Questions of a private nature should be e-mailed to the course instructor (see below on how to e-mail within E-learning). In all cases, please allow 24 hours for a response. Every effort will be made to answer questions posted over the weekend with 24 hours. If not addressed, they will be addressed on the following Monday.

WHEN DO I EMAIL MY INSTRUCTOR?

Questions about the course should be e-mailed to the instructor through the e-mail tool in E-learning.

Examples of e-mail questions for the instructor to get clear, concise responses:

1. I think there is an error in my grade for the assignment in module 3 (be sure to explain exactly why you think there is an error and provide documentation)
2. I am behind in the course and I would like to know how I may catch up (in such a case, your instructor may ask you to set up a Skype meeting or a time to call on the telephone)

If you have questions about the course itself, please reread the syllabus before asking a question. If the answer is not in the syllabus, check the Course Questions discussion board (this discussion board can be located by clicking on the discussions menu tab on the left of the course home page). If the answer to your question is not there, please post the question on the Course Questions discussion board.

DO NOT e-mail the instructor with general course questions. If your question is of a personal nature, e-mail your instructor from within e-learning system using the instructions below. Late work that involves technical difficulties with E-learning MUST be accompanied by a ticket number from the Help Desk.

HOW TO EMAIL YOUR INSTRUCTOR

When emailing your instructor, please do so through Canvas.

To send an e-mail from the course:

1. Click on the mail icon that is located the left side of your screen.

2. Click the "Compose Message" button.
3. "To: window" will display.
4. Locate your instructor's name.
5. Always include a description in your subject line
6. Type your message and add any necessary attachments. Be sure that your subject line is meaningful.
7. Click "send."

ACADEMIC INTEGRITY

Students are expected to act in accordance with the University of Florida policy on academic integrity. As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge:

“We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied:

“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For additional information regarding Academic Integrity, please see Student Conduct and Honor Code or the Graduate Student Website for additional details:

<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>

<http://gradschool.ufl.edu/students/introduction.html>

Please remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

PLAGIARISM

Students must understand what plagiarism is and must not engage in this behavior when completing assignments and tests in this course. The University of Florida Student Honor Code states that plagiarism includes but is not limited to:

- Quoting oral or written materials including but not limited to those found on the internet, whether published or unpublished, without proper attribution.

- Submitting a document or assignment that in whole or in part is identical or substantially identical to a document or assignment not authored by the student.

Student whose assignments/tests exhibit evidence of plagiarism will receive zeros for those assignments and tests for the first offense and will receive a warning. Students who continue to engage in this behavior after the warning will be reported to the UF Dean of Students Office.

PROHIBITED COLLABORATION OR CONSULTATION

Student found to be involved in sharing answers and/or collaborating on exams or assignments will receive zeros for those exams and assignments. Students who continue to engage in this behavior after the warning will be reported to the UF Dean of Students Office.

Online Faculty Course Evaluation Process

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

Support Services

Accommodations for Students with Disabilities:

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that may interfere with their academic performance. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

- The Counseling and Wellness Center 352-392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their web site for more information: <http://www.counseling.ufl.edu>. On line and in person assistance is available.
- You Matter We Care website: <http://www.umatter.ufl.edu/>. If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.
- If you live in Gainesville or the immediate surrounding areas, the Student Health Care Center at UF Health is a satellite clinic of the main Student Health Care Center that is located on Fletcher Drive on campus is available to you. Student Health at UF Health offers a variety of clinical services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: <https://shcc.ufl.edu/>
- If you live in Gainesville or the immediate surrounding areas, the UF Health Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32698, ufhealth.org/emergency-room-trauma-center.
- University Police Department: Visit police.ufl.edu/ or call 352-392-1111 (or 9-1-1 for emergencies).
- Crisis intervention is always available 24/7 from:

Alachua County Crisis Center:

(352) 264-6789

<http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx>

Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.

Academic Resources

E-learning technical support: Contact the UF Computing Help Desk at 352-392-4357 or via e-mail at helpdesk@ufl.edu.

Career Connections Center: Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services career.ufl.edu/.

Library Support: cms.uflib.ufl.edu/ ask various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center: Broward Hall 352-392-2010 or to make an appointment 352 392-6420. General study skills and tutoring. teachingcenter.ufl.edu/

Writing Studio: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers. writing.ufl.edu/writing-studio/

Student Complaints On-Campus: sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/

On-Line Students Complaints: distance.ufl.edu/student-complaint-process