

**University of Florida
College of Medicine Syllabus
GMS 6711 Neurobiology of Pain (1 credit)**
 Spring, 2018
 Delivery Format: On-Campus,
 Mondays, 9:35AM, CTRB #2161

Instructor Name: Yenisel Cruz-Almeida, MSPH, PhD
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Prerequisites None

PURPOSE AND OUTCOME

Course Overview

Overview of the neurobiology of pain, including peripheral, spinal, subcortical and cortical nociceptive processing in both humans and non-humans animals.

Course Objectives and/or Goals

At the completion of this course participants will be able to:

- 1) Define the scope of the societal impact of pain on healthcare systems
- 2) Describe the neurobiological processes involved in nociception and the pain experience
- 3) Describe methods for investigating pain processing in both nonhuman and human animals
- 4) Explain the mechanisms of pharmacological and psychological modulation of pain
- 5) Compare and contrast sources of variability in the human pain experience
- 6) Develop an intervention plan for individuals experiencing a pain condition based on the underlying pain-generating mechanisms

Instructional Methods

The course will be taught using lecture and discussion formats. As a participant in this course you will be expected to complete assigned readings prior to attending class.

DESCRIPTION OF COURSE CONTENT

Topical Outline/Course Schedule

Week	Date(s)	Topic(s)	Faculty
1	Monday, Jan 8, 2018	Introduction	Yenisel Cruz-Almeida, MSPH, PhD
2	Thursday, Jan 18	Peripheral Neurobiology	Rick Johnson, PhD
3	Monday, Jan 22	Spinal Neurobiology	Robert Caudle, PhD
4	Monday, Jan 29	Trigeminal System	John Neubert, DDS, PhD

Week	Date(s)	Topic(s)	Faculty
5	Monday, Feb 5	Supraspinal processing	Yenisel Cruz-Almeida, MSPH, PhD
6	Monday, Feb 12	Pharmacology of pain	Robert Caudle, PhD
7	Monday, Feb 19	Pain Assessment in non-human animals	Robert Caudle, PhD
8	Monday, Feb 26	Pain modulation	Joseph Riley III, PhD
9	Monday, Mar 5	Spring Break	
10	Monday, Mar 12	Variability in pain	Roger Fillingim, PhD
11	Monday, Mar 19	Pain Laboratory Session	Yenisel Cruz-Almeida, MSPH, PhD
12	Monday, Mar 26	Independent work	Students
13	Monday, Apr 2	Pain conditions	Mark Bishop, PT, PhD
14	Monday, Apr 9	Presentations	Students
15	Monday, Apr 23	Presentations	Students

Course Materials and Technology

No required texts.

Class website will be provided at first class meeting.

For technical support for this class, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

ACADEMIC REQUIREMENTS AND GRADING

Assignments

1. Weekly reflection essays will be required where students will integrate each of the weekly lecture materials.
2. Students will select a clinical pain condition and at the end of the semester, students will present a 15-minute presentation addressing the condition, the associated mechanisms and specific treatment modalities which based on the mechanisms, may be effectively used for pain relief. Students are expected to integrate basic, behavioral and system level mechanisms learned throughout the semester into their clinical presentation.

Grading

Requirement		Due date	Points or % of final grade (% must sum to 100%)												
Weekly Reflection Essays		Every Sunday	50%												
Class Attendance		Weekly	25%												
Final Presentation		End of semester	25%												

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	WF	I	NG	S-U
Grade Points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0.0	0.0	0.0	0.0	0.0

Please be aware that a C- is not an acceptable grade for graduate students. In addition, a grade of C counts toward a graduate degree only if an equal number of credits in courses numbered 5000 or higher have been earned with an A.

For greater detail on the meaning of letter grades and university policies related to them, see the Registrar's Grade Policy regulations at:

<http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Exam Policy

Policy Related to Make up Exams or Other Work

Please note: Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail me within 24 hours of the technical difficulty if you wish to request a make-up.

Policy Related to Required Class Attendance

All faculty are bound by the UF policy for excused absences. For information regarding the UF Attendance Policy see the Registrar website for additional details:

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

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

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.

Online Faculty Course Evaluation Process

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

SUPPORT SERVICES

Accommodations for Students with Disabilities

If you require classroom accommodation because of a disability, you must register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class. The Dean of Students Office will provide documentation of accommodations to you, which you then give to me as the instructor of the course to receive accommodations. Please make sure you provide this letter to me by the end of the second week of the course. 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.
- The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands 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/>
- 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.
