

University of Florida
GMS 6417 Integrative Aging Physiology, Fall 2016

Course number: GMS 6417
Semester: Fall 2016
Time: Tues & Thurs 3-4:30 PM
Room: HPNP G-111
Office Hours: By appointment

Contact Information:

Course Director: Rui Xiao, PhD
Office: DG-21A, Dental Science Building
Email: rxiao@ufl.edu
Phone: 352-294-5167

Teaching Assistants: Lanlan Tang
Office: P-109, Pharmacy Building
Email: lanlantang@ufl.edu
Phone: 352-294-5058

Justification

The overall goal of this IDP class is to introduce a specific number of subjects in the broad field of physiology of aging. In class, we will discuss the readings assigned and explore the subject in more detail by student presentations. The meeting will begin with a brief introduction to the subject by the lecturer. This will be followed by presentations of the assigned readings, in PowerPoint format, by students. Usually these papers will be assigned on a weekly basis to make sure we have the most up-to-date literature and that we also incorporate individual interests in the reading. By the end of the course, you should have a solid foundation in a number of areas related to research on aging and also acquire the skills needed to seek out and learn more about this exciting field.

Prerequisites

GMS 6400C Principles of Physiology (or Course Director Permission)

Catalog description

GMS: This course will discuss the effect of the aging process on the physiology of energy metabolism and the impact to systems involved in maintaining physical and cognitive function. This will include a discussion of changes to skeletal muscle and neurological systems that are known to become dysregulated with age.

Course Format and Grading:

Frequency of class: Course is taught twice per week

Duration of class: Each session will be held for 1 ½ hrs. One hour or less of lecture and the remainder student presentations of a paper associated with the subject, chosen by the lecturer.

Grading:

Grading

Class attendance	= 10%
Class participation	= 10%
2 Presentations*	= 30%
Reaction Paper 1	= 25%
Reaction Paper 2	= 25%
Total	= 100%

*Number of presentations depends on the class size. Typically less than 10 students are enrolled. Hence, students will present no more than two times. Each presentation is worth 15% of the grade.

Grading Scale

A = 90 or above	C = 70 - 73
A- = 87 - 89	C- = 67 - 69
B+ = 84 - 86	D+ = 64 - 66
B = 80 - 83	D = 60 - 63
B- = 77 - 79	D- = 57 - 59
C+ = 74 - 76	E = 56 or below

Reaction papers:

Students will select one lecture topic and compose a 2-4 page double-space "reaction" paper that describes the major aspects of the research presentations and your own interpretation. Reaction Paper 1 is due on October 12, 2015, while Reaction Paper 2 is due November 30, 2015. A paper should include a background section, study design, analytic methods, and limitations sections. The proposal should include multiple disciplines and be in sufficient depth to allow critical evaluation.

Class Attendance Policy:

Attendance to classes is required.

Course Participation:

Ask at least 1 thought/question that contributes to class learning in each class.

Presentation

Presentations will be assessed incorporating the following components:

1. Introduce the question
2. Background
3. Statement of the hypothesis
4. Methods
5. Results

6. Interpretation
7. Limitations
8. Next step
9. Comments on innovation
10. Style of presentation

For a particular topic, the lecturer and the course director will provide you written feedback on your presentation on a weekly basis including strengths, weaknesses and the grade. In addition, we will also provide feedback on your level of class participation. This way, you may make adjustments in real time to your presentations and participation.

Texts and reading

The information in the following textbook and aging research website is coordinated with the in-class discussions. These textbook is not required, but chapters from the book and website will be used for reading, presentation and discussion material.

1. Handbook of the Biology of Aging, 7th Edition (2011). Editors: Edward J Masoro & Steven N Austad. Elsevier Inc. Burlington, MA.
2. Theories of Aging, American Federation for Aging Research (AFAR):
http://www.afar.org/docs/migrated/111121_INFOAGING_GUIDE_THEORIES_OF_AGINGFR.pdf

Fall 2015 GMS6417 Integrative Aging Physiology Schedule

Week	Session Topics	Speaker
Week 1 8/23, 8/25	Basic Physiology of Aging – Frailty and Mortality	Xiao, R
Week 2 8/30, 9/1	Activity Energy Expenditure and Aging	Manini, T
Week 3 9/6, 9/8	Genetics of Aging	Xiao, R
Week 4 9/13, 9/15	Sensory Modulation of Aging	Xiao, R
Week 5 9/20, 9/22	Age-Related Hearing Loss	Someya, S
Week 6 9/27, 9/29	Basic Physiology and Dysfunction of Taste and Smell	Bartoshuk, L
Week 7 10/4, 10/6	Central Roles of Mitochondrial in Aging and Physiology	Leeuwenburgh, C
Week 8 10/11	Reaction Paper 1	Xiao, R
Week 9 10/18, 10/20	Animal Models for Aging Research	Xiao, R
Week 9 10/25, 10/27	Cognition and Memory Dysfunction	Burke, S Johnson, S
Week 11 11/1	Visual Disorders	Boye, S
Week 11 11/3	An Overview of Age-related Neurodegenerative Diseases	Park, H
Week 12 11/8, 11/10	Basic Physiology and Dysfunction of Liver	Kim, JS
Week 13 11/15, 11/17	Exceptional Longevity	Xiao, R
Week 14 11/22	Intervention (Calorie Restriction and Exercise)	Anton, S
Week 15 11/29	Reaction Paper 2	Xiao, R

Xiao, R