

APK 4115
Neuromuscular Aspects of Exercise
Spring 2017

Instructor: Dr. Basma Yacoubi Keyhani
Email: basma@ufl.edu
Office: FLG 1A
Phone: 352-294-1749
Office Hours: By Appointment

Class Room: FLG 0230
Class Days: MWF
Class Time: Period 8 (3:00 – 3:50 pm)

Course Overview

University of Florida Course Description: Designed to provide an in-depth analysis of muscle structure and function; how muscles produce movement; adaptation of muscle to resistance training, endurance training and various manipulations used in rehabilitation; adaptation of muscle to disuse; and muscle responses to injury.

Prereq: APK 3110C with grade of C.

Textbook

RM Enoka. Neuromechanics of Human Movement. 5th edition. Human Kinetics. ISBN 978-1-4504-5880-1 (Suggested only)

Lecture notes and articles will be provided for all topics covered (see schedule).

General Course Policies

Attendance: Make every effort to attend all lectures. Although attendance might not affect your grades directly, it could influence them indirectly. Numerous concepts that will be discussed only during class (and are not in the book) will be part of your weekly quizzes.

Make-up quizzes: Absence on quiz day will result in a zero on the quiz. There will be no make-up quizzes, however you will be allowed to drop the three lowest quiz grades.

Accommodations: Students requesting classroom or other special accommodations must first register with the Dean of Students Office—Disability Resource Center (DRC).

The Dean of Students Office will provide documentation to the student who must then present the documentation to the instructor when requesting accommodation. For optimal consideration, you must see me within the first three days of class.

Technology: The use of cell phones* (and the like) is strictly prohibited during lectures and exams. Any cell phone or other electronic device used during an exam will be considered a violation of the student honor code (i.e., cheating) and will result stiff penalties. Laptop computers are welcome in class as long as you are using them for class notes. Your computer must be offline. If you need to download class notes do so before class starts. Violation of this policy will result in point deductions at my discretion.

Communication: You are responsible for checking announcements and course postings on E-LEARNING. This is how I will communicate with you. All course grades will be posted on E-LEARNING. Any discrepancies should be pointed out to me on or before the last day of finals week. When emailing me, APK4115 should be written on the subject line.

Academic Honesty: On all work submitted for credit by students 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."*** Any student found violating this honor code will receive a zero for that exam or assignment and may be assigned other educational sanctions at the instructor's discretion.

Evaluations: Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online 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 the assessments will also be available to students at website.

Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies

Student Learning Objectives

Knowledge: Discuss, explain, and defend subject matter relevant to neuromuscular physiology.

Skills: Discuss, explain, and defend specific skills related to neuromuscular physiology.

Professional Behavior: Demonstrate proficiency in presenting and explaining neuromuscular physiology concepts in a professional manner.

Course Examinations and Grading

Activity/Assignment	Points
1. Quizzes x 8 (11 quizzes will be given - will drop the lowest)	40.0 (8x5)
2. Presentation	7.0
3. Presentation participation	3.0
4. Exit quiz	5.0
5. Exam 1	22.5
6. Exam 2	22.5
TOTAL POINTS	100.0

Exams (22.5 pts)

Exams and Final can comprise multiple choice, short answer questions or a combination of both.

The final is optional for this course. In time, you will need to add your name to a sign-up sheet if you decide to take the final. The final will be 22.5 pts and will replace your lowest exam grade.

The class grade will be based on quizzes, presentation, presentation participation, and exams as detailed on the table above.

Quizzes (40 pts)

There will be a total of 11 quizzes and you will be allowed to drop 3. Quizzes can comprise multiple choice, short answer questions or a combination of both. Your final quiz grade will be based on the highest 8 quizzes. These quizzes are intended to encourage reading and attendance. Questions will come from material (lectures and presentations) as detailed on your syllabus.

Presentation (7.5 pts)

This presentation will be based on the original research article assigned to your group. On the first day of class you will sign-up to a group of three or four students.

The length of the presentation should be **15 minutes** and should be in the format of a PowerPoint presentation. The 15 minute limit is strict and you will be cut short if you go over your time. My suggestion, therefore, is to practice the presentation ahead of time. Conciseness, clarity, and information delivery will be part of your grade.

This presentation will be evaluated based on the following criteria: a) the evaluation from the Instructor; b) your grade from your group peer in terms of your participation in the presentation. Each person in the group will grade each other for their contribution to the presentation. The total grade will be your group presentation grade (from me) x group peer grade. For example, if your group grade from me is 90% (18 points) but you did not contribute much to your presentation (e.g. average grade from your peer is 50%), then your total grade for the presentation will be 9 points. You will be asked to provide these grades the day of your presentation.

Presentation attendance/participation (3 pts)

On presentation day every student will turn in a sheet of paper with one question per article. Questions should be typed and your name should figure on the upper left corner.

I will take attendance on presentation day. There are 13 presentation days. If you are present and turn in appropriate questions for:

12 you will receive 3 points.

11 you will receive 2.5 points.

10 you will receive 2 points.

09 you will receive 1.5 point.

08 you will receive 1 point.

07 you will receive 0.5 point.

<7 you will receive 0 points.

Grades: The total points earned from quizzes and presentation will be summed. There is no curve for this course and grades will not be rounded up. If you earn a 79.94%, you will receive a C+, not a B. The following grading scale will be used to assess students in this course. For more detailed information on current UF grading policies, please see the undergraduate catalog web page:

www.registrar.ufl.edu/catalog/policies/regulationgrades

Letter Grade	Points Necessary for Each Letter Grade	Percent of Total Points	GPA Equivalent
A	93	93.00-100%	4.0
A-	90	90.00-92.99%	3.67
B+	87	87.00-89.99%	3.33
B	83	83.00-86.99%	3.0
B-	80	80.00-82.99%	2.67
C+	77	77.00-79.99%	2.33
C	70	70.00-76.99%	2.0
D+	67	67.00-69.99%	1.33
D	60	60.00-66.99%	1.0
E	<60	0-59.99%	0

Tentative Lecture Schedule

This approximates what the semester will consist of. This outline is subject to change at any point during the semester. Please make a habit to check the CANVAS announcements regularly as this is where schedule changes will be posted.

Week	Date	Lecture Topic
1	M - Aug 21	Syllabus explanation / Presentation of scientific data
	W - Aug 23	Entry Exam (Mandatory)
	F - Aug 25	Lecture 1: Introduction to the motor system
2	M - Aug 28	Lecture 2: Synaptic transmission
	W - Aug 30	Presentation 1
	F - Sept 1	Quiz 1 (L1P1)
3	M - Sept 4	No class - Labor Day
	W - Sept 6	Presentation 2
	F - Sept 8	Quiz 2 (L2P2)
4	M - Sept 11	Lecture 3: Muscle anatomy and structure
	W - Sept 13	Presentation 3
	F - Sept 15	Quiz 3 (L3P3)
5	M - Sept 18	Lecture 4: Muscle mechanics
	W - Sept 20	Presentation 4
	F - Sept 22	Quiz 4 (L4P4)
6	M - Sept 25	Lecture 5: Motor units I
	W - Sept 27	Presentation 5
	F - Sept 29	Quiz 5 (L5P5)
7	M - Oct 2	Lecture 6: Motor Units II
	W - Oct 4	Presentation 6
	F - Oct 6	Homecoming [take home Quiz 6 (L6P6)]
8	M - Oct 9	Lecture 7: Voluntary actions I
	W - Oct 11	Presentation 7
	F - Oct 13	Exam 1 [L1-L6]
9	M - Oct 16	Lecture 8: Voluntary actions II
	W - Oct 18	Presentation 8
	F - Oct 20	Quiz 7 (L7P7, L8P8)
10	M - Oct 23	Lecture 9: Motor Learning
	W - Oct 25	Presentation 9

	F - Oct 27	Quiz 8 (L9P9)
11	M - Oct 30	Lecture 10: Reflexes
	W - Nov 1	Presentation 10
	F - Nov 3	Quiz 9 (L10P10)
12	M - Nov 6	Lecture 11: Acute Adjustments
	W - Nov 8	Presentation 11
	F - Nov 10	Veterans Day
13	M - Nov 13	Lecture 12: Chronic Adaptation - Aging
	W - Nov 15	Presentation 12
	F - Nov 17	Quiz 10 (L11P11, L12P12)
14	M - Nov 20	Lecture 13: Chronic adaptation - Disease
	W - Nov 22	Thanksgiving
	F - Nov 24	Thanksgiving
15	M - Nov 27	Presentation 13
	W - Nov 29	Quiz 11 (L13P13)
	F - Dec 1	Flex Day (Review, Make ups...)
16	M - Dec 4	Exit Quiz (Mandatory)
	W - Dec 6	Exam 2 [L7-L13]
	F - Dec 9	Reading Day
17	F - Dec 15	FINAL 15A 7:30-9:30 am (Optional)