

UNIVERSITY OF FLORIDA
Department of Applied Physiology and Kinesiology

APK 3200: MOTOR LEARNING – SPRING 2019

Instructor: Diba Mani, Ph.D.
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Office: FLG 131
Office Hours: Posted in E-Learning and by appointment

Sections: MWF 8:30-9:20 AM (Period 2) in FLG 285, Course No. 10789 (Section 221A)
MWF 3:00-3:50 PM (Period 8) in FLG 260, Course No. 10788 (Section 2059)

Recommended Text:

RA Schmidt and TD Lee. *Motor Control and Learning: a Behavioral Emphasis*. 6th edition. Human Kinetics.

Lecture notes and articles will be provided throughout the term via E-Learning (CANVAS: <https://lss.at.ufl.edu/>).

Overview and Objectives:

This is an introductory course in motor control and learning. It is designed to provide a basic understanding of theoretical concepts on how we learn to control movement and become skilled at movements. Although the emphasis of this course will be behavioral, it will include elements from neurophysiology and neuroscience, and implement evidence based on research in relevant fields. Specific learning objectives are:

1. Appreciate various theoretical concepts of how humans control movement and how new movements are learned and retained.
2. Understand how factors can affect the quality of movement performance and learning.
3. Understand the neurological and mechanical processes out of which complex movements are created.
4. Application of these concepts for therapeutic purposes.

The ultimate learning goal for the course is to enable you to integrate knowledge (discuss, explain, and defend subject matter) relevant to motor control and learning. Beyond this, the ability to demonstrate proficiency in presenting and explaining relevant concepts in a professional manner is vital.

Communication: Students are responsible for checking announcements and course postings on E-Learning. Grade discrepancies must be discussed with the instructor as they appear, but no later than the last day of class. When e-mailing the instructor, please clarify the course in the subject line (i.e. APK 3200/Motor Learning, 3 PM/Period 8).

Course Goals: The following table describes the UF General Education student learning outcomes (SLOs) and the specific course goals for APK 3200. By the end of this course, students should be able to:

SLO	Course Goals	Assessment Method
Content: Demonstrate competence in the terminology, concepts, methodologies and theories used within the discipline	<ul style="list-style-type: none"> • Appreciate various theoretical concepts of how humans control movement and how new movements are learned and retained • Understand factors that can affect the quality of movement performance and learning • Understand the neurological and mechanical processes out of which complex movement behaviors are created • Application of these concepts for therapeutic purposes 	Quizzes Final Exam
Critical Thinking: Analyze information carefully and logically from multiple perspectives, using discipline-specific methods, and develop reasoned solutions to problems	<ul style="list-style-type: none"> • Predict motor dysfunctions if given the symptomology • Predict potential causes of deficits in motor control/learning • Predict optimal conditions for motor control/learning through the scientific method (research design) 	Quizzes Presentations Final Exam

Grading: Your final grade is based on scores earned on the following. There is no curve; grades will not be rounded up.

Activity/Assignment	Points
1. Quizzes (10 x 5 points)	50
2. Presentation Performance	20
3. Presentation Attendance and Evaluation	5
4. Final Exam	25
TOTAL	100

1. Quizzes (50%) Quizzes will comprise a series of questions to be answered closed-book in the classroom in a secure format via E-Learning. You will be asked to bring your laptop or electronic pad to complete this and receive scores prior to the next lecture. Material will be based on the topics discussed in the lectures between quizzes. There will be no make-up quizzes for vacations, volunteering or paid jobs, and other non-University sanctioned events (i.e. sports). Each quiz is worth 5 points.
2. Presentation Performance (20%) The presentation will be based on a pre-assigned topic/paper. You will be randomly assigned to a project in a small group (~4 classmates/group). The length of the presentation should be about 30 minutes. This may include a quiz (i.e. Kahoot or Jeopardy!), worksheet, or interactive activity/demo (in fact, engagement is encouraged). The format

for these presentations should be a Microsoft PowerPoint presentation. A rubric will be provided in the first week of class, which will be developed by the class as a whole then.

3. Presentation Attendance and Evaluation (5%) You will be given points for attendance and participation on presentation days. There will be a discussion board on E-Learning, as well as time for in-class feedback.
4. Final Exam (25%) The final exam will be cumulative and may comprise multiple choice, fill-in-the-blank, and short answer. The final exam for the sections are as follows:

Section 10789 – MWF Period 2 (8:30 AM section)

Final exam on May 1, 2019; 3:00-5:00 PM in FLG 285

Section 10788 – MWF Period 8 (3:00 PM section)

Final exam on May 1, 2019; 12:30-2:30 PM in FLG 260

Grading is in alignment with University of Florida policies:

<https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>.

Grade distribution in this course:

A	93 points (93.00 – 100% of total points)
A–	90 points (90.00 – 92.99% of total points)
B+	87 points (87.00 – 89.99% of total points)
B	83 points (83.00 – 86.99% of total points)
B–	80 points (80.00 – 82.99% of total points)
C+	77 points (77.00 – 79.99% of total points)
C	73 points (73.00 – 76.99% of total points)
C–	70 points (70.00 – 72.99% of total points)
D+	67 points (67.00 – 69.99% of total points)
D	63 points (63.00 – 66.99% of total points)
D–	60 points (60.00 – 62.99% of total points)
F	< 60 points (0 – 59.99% of total points)

Again, there is no curve; grades will not be rounded up. Please do not ask, as requests for additional extra credit or special exceptions to these grading policies may be interpreted as an honor code violation (i.e., asking for preferential treatment) and will be handled accordingly. If you receive a 79.94%, you will receive a C+; not a B-.

Pending the course schedule as we progress through the semester and performance on quizzes, there may be opportunities for extra credit in the form of Supplemental Learning Experiences, which are take-home activities designed to allow students to expand and elaborate on topics discussed in lecture in a more hands-on method.

- Honor Code:** All University of Florida students are responsible for knowing and adhering to the University academic integrity policy. Students found to be in violation of the academic integrity policy will be reported and may be subject to sanctions.
- It is a violation of the honor code (<https://sccr.dso.ufl.edu/process/student-conduct-code/>) to obtain copies of assignments, exams, or quizzes for this course from individuals or vendors who distribute such material.
- Accommodations:** If you have a disability that needs to be accommodated, you must register with the Dean of Students Office – Disability Resource Center (DRC), who will determine the necessary accommodations based on your documented disabilities. Documentation will ideally be presented to the instructor within the first week of class for optimal consideration.
- Other accommodations (i.e. academic, religious observances) may be considered if ideally presented within the first week of class. Notes beyond those distributed by the instructor may be acquired from a classmate. Quizzes may not be made up, and unexcused absence will result in a 0.
- 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 in severe penalties. Laptop computers are welcome in class. You may be asked to bring an electronic device for quizzes and the exam. If you are unable to bring a laptop to class, some paper copies will be available. For those taking quizzes or the exam on paper, please bring a writing utensil and UFID card, and realize your scores may be published later than those testing on electronic devices.
- Attendance:** Requirements for class attendance and make-up work in this course are consistent with University of Florida policies:
<https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>.
- Course Material:** Course material beyond the textbook will be made available via E-Learning. The textbook will be available via course reserves at the nearby libraries.
- Evaluations:** Students are expected to provide feedback on the quality of instruction in this course. These are conducted online at <https://evaluations.ufl.edu>, and are typically open during the last 2-3 weeks of the semester.
- Constructive feedback throughout the semester is always welcome. Please reach out via CANVAS messaging, initially.
- Counseling:** The contact site for university counseling services and mental health services: <https://counseling.ufl.edu/>. The University Police Department can be reached via 392-1111 or 9-1-1 for emergencies.

Tentative Course Schedule:

The following is an approximate course schedule outlining the content for this term's course. A more detailed schedule denoting each day's topic and quiz dates for this term's course will be announced in class and via E-Learning at the beginning of the semester, and modified throughout.

Quizzes will be organized as one per topic of discussion (across ten subjects described below, following the basic introduction and history of course content). Again, this schedule is subject to change. Changes to this schedule will be posted in CANVAS as an announcement, including any lecture cancellations.

APK 3200 – SP 19 TENTATIVE COURSE SCHEDULE

Week	Date	Lecture Topic	Associated Reading
1	M – Jan 7	Course Introduction	Syllabus
	W – Jan 9	Evolution of a Field of Study	Chapter 1
	F – Jan 11	Methodology for Studying Motor Performance (EMG Demo)	Chapter 2
2	M – Jan 14	Methodology for Studying Motor Performance	Chapter 2
	W – Jan 16	Presentation 1	
	F – Jan 18	Methodology for Studying Motor Performance	Chapter 2
3	M – Jan 21	Martin Luther King, Jr. Day – No Class	
	W – Jan 23	Presentation 2	
	F – Jan 25	Quiz 1; Human Information Processing	Chapter 3
4	M – Jan 28	Human Information Processing	Chapter 3
	W – Jan 30	Presentation 3	
	F – Feb 1	Quiz 2; Attention and Performance	Chapter 4
5	M – Feb 4	Attention and Performance	Chapter 4
	W – Feb 6	Presentation 4	
	F – Feb 8	Quiz 3; Sensory and Perceptual Contributions (Visual Feedback Demo)	Chapter 5
6	M – Feb 11	Sensory and Perceptual Contributions	Chapter 5
	W – Feb 13	Presentation 5	
	F – Feb 15	Sensory and Perceptual Contributions	Chapter 5
7	M – Feb 18	Quiz 4; Central Contributions to Motor Control	Chapter 6
	W – Feb 20	Quiz 5; Presentation 6	
	F – Feb 22	Speed, Accuracy, and Coordination	Chapter 7
8	M – Feb 25	Speed, Accuracy, and Coordination	Chapter 7
	W – Feb 27	Presentation 7	
	F – Feb 29	Speed, Accuracy, and Coordination	Chapter 8
9	M – Mar 4	Spring Break – No Class	
	W – Mar 6	Spring Break – No Class	
	F – Mar 8	Spring Break – No Class	
10	M – Mar 11	Motor Learning Concepts and Research Methods	Chapter 9
	W – Mar 13	Quiz 6; Presentation 8	
	F – Mar 15	Motor Learning Concepts and Research Methods	Chapter 9

11	M – Mar 18	Motor Learning Concepts and Research Methods	Chapter 9
	W – Mar 20	Presentation 9	
	F – Mar 22	Motor Learning Concepts and Research Methods	Chapter 9
12	M – Mar 25	Quiz 7; Conditions of Practice	Chapter 10
	W – Mar 27	Presentation 10	
	F – Mar 29	Conditions of Practice	
13	M – Apr 1	Conditions of Practice	Chapter 10
	W – Apr 3	Presentation 11	
	F – Apr 5	Conditions of Practice	Chapter 10
14	M – Apr 8	Quiz 8; Augmented Feedback	Chapter 11
	W – Apr 10	Presentation 12	
	F – Apr 12	Augmented Feedback	Chapter 11
15	M – Apr 15	Quiz 9; Learning, Retention, and Transfer	Chapter 12, 13
	W – Apr 17	Presentation 13	
	F – Apr 19	Learning, Retention, and Transfer	Chapter 12, 13
16	M – Apr 22	Learning, Retention, and Transfer	Chapter 12, 13
	W – Apr 24	Quiz 10; open day for rescheduled presentations	
	F – Apr 26	Reading Day – No Class	
	W – May 1	Final Examination Section 10789 – MWF Period 2 (8:30 AM section) <u>Wednesday, May 1st: 3:00-5:00 PM</u> Section 10788 – MWF Period 8 (3:00 PM section) <u>Wednesday, May 1st: 12:30-2:30 PM</u>	