

APK 3200: Motor Learning

Fall 2023

General Course Information

Credits: 3 credit hours

Location: FLG 265

Meeting Time: Monday, Wednesday and Friday 9:35 – 10:25

Course Instructor

Dr. Rachael Seidler, Professor

Department of Applied Physiology and Kinesiology

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FLG 142, 352-294-1722

Office Hours: Monday, Wednesday 10:30 – 11:30

Course Description

Provides background for understanding, analyzing, and teaching skills in sports and dance. Attention to specific aspects of psychomotor developments and theoretical models of skill acquisition.

Course Objectives

1. Differentiate and explain learning theories applicable to skill acquisition and retention
2. Apply knowledge of instructional strategies for basic skill acquisition
3. Appraise current evidence and trends in motor learning and motor control
4. Recognize general (classic) research paradigms used in motor learning and control research

Required Textbook

The following book is recommended but not required: RA Schmidt and TD Lee. Motor Control and Learning. A Behavioral Emphasis. 5th edition. Human Kinetics. ISBN 0-7360-7961-0. Additional papers will be provided for specific topics and made available on canvas.

Course Activities and Grading

Activity/Assignment	Points
Midterm Exam	25
Final Exam	35
Quizzes x 12	35
In class assignments	5
Total	100

Midterm Exam

Questions will be based on modules 1-6. The midterm exam will consist of 40 multiple-choice and true-false questions, each worth 0.5 points, as well as several short answer questions (5 points), for a

total of 25 points. Students are not permitted access to any kind of materials or notes during this assessment. Questions are generated by the course instructor and most of the focus should be given to the lecture notes, labs, and in class assignments when studying. All assessments will be taken through canvas using the lockdown browser IN CLASS (bring your laptop on these days). Students will be allowed 50 minutes to complete the midterm exam.

Final Exam

Questions will be based primarily on modules 7-12. The final exam will consist of 40-50 multiple-choice and true-false questions, each worth 0.25 to 1.0 point (total of 25 points). There will also be several short answer questions (10 points) for a total of 35 points. Students are not permitted access to any kind of materials or notes during this assessment. Questions are generated by the course instructor and most of the focus should be given to the lecture notes and labs when studying. All assessments will be taken through canvas using the lockdown browser IN THE CLASSROOM (bring your laptop on these days). Students will be allowed 90 minutes to complete the final exam.

Quizzes

There will be a total of 12 quizzes. There will be a quiz after each module is completed. Each quiz will consist of 5-10 questions, for a total of 2.9 points per quiz. Questions will be multiple choice and true/false. Students are not permitted access to any kind of materials or notes during these assessments. Questions are generated by the course instructor and most of the focus should be given to the lecture notes and labs when studying. All assessments will be taken through canvas using the lockdown browser. Students will be allowed 15 minutes to complete the quiz.

Labs

There will be a total of 12 labs. Labs will be completed at home, and there will be questions on the quizzes/exams from the labs. There are no points for completing the labs and there is nothing to submit. Specific details for the labs can be found on the canvas website.

In-Class Assignments

During class, you will be given a series of questions that will require you to apply knowledge from the module/lab into real-world situations. There will be points on offer during the class, based on your answers to the questions. Nothing will be submitted, but you will have to successfully answer questions in class to receive points for the in-class assignment. A couple of useful links for class assignments/research:

PubMed: <https://pubmed.ncbi.nlm.nih.gov/> Links to an external site.

Impact

Factor: <https://jcr.clarivate.com/jcr/home?app=jcr&referrer=target%3Dhttps:%2F%2Fjcr.clarivate.com%2Fjcr%2Fhome&init=Yes&authCode=null&SrcApp=IC2LS> Links to an external site.

Extra Credit: No extra credit is offered for this course.

Grading Scale: Quiz and exam scores will be uploaded directly into canvas. Any discrepancies with points displayed in the gradebook must be brought to the attention of the instructor as soon as possible, or before the last day of class. **There is no curve for this course and final grades will not be rounded up.** More detailed information regarding current UF grading policies can be found

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

Any requests for additional extra credit or special exceptions to these grading policies will be interpreted as an honor code violation (i.e., asking for preferential treatment) and will be handled accordingly.

Grades

The total points earned from course activities will be summed up. The following grading scale will be used to assess students in this course.

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	73	73.00-76.99%	2.0
C-	70	70.00-72.99%	1.67
D+	67	67.00-69.99%	1.33
D	63	63.00-66.99%	1.0
D-	60	60.00-62.99%	.67
E		0-59.99%	0

General Course Policies

Late policy: Assignments may be submitted late with a valid and university approved excuse. Without a university approved reason, 10% of possible points will be deducted per day. University policy regarding attendance and approved reasons for missing a class and associated assignment: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Make up policy: A student experiencing an illness should visit the UF Student Health Care Center or their preferred healthcare provider to seek medical advice and obtain documentation. If you have an illness, family emergency or death, please contact the Dean of Students Office (www.dso.ufl.edu) and follow the DSO Care Team procedures for documentation and submission of a request for make-up assignment (<https://care.dso.ufl.edu/instructor-notifications/>). The DSO will contact the instructor. Do not provide any documentation to the instructor regarding illness or family emergency. This is your personal and protected information. The DSO is qualified to receive and verify the documents you provide. The instructor will follow the recommendations from the DSO.

Accommodations: Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting their Get Started page at <https://disability.ufl.edu/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.

Campus Resources

Health and Wellness

- *U Matter, We Care*: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit <https://umatter.ufl.edu/> to refer or report a concern and a team member will reach out to the student in distress.
- *Counseling and Wellness Center*: Visit <https://counseling.ufl.edu/> or call 352-392-1575 for information on crisis services as well as non-crisis services.
- *Student Health Care Center*: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit <https://shcc.ufl.edu/>
- *University Police Department*: Visit <https://police.ufl.edu/> or call 352-392-1111 (or 9-1-1 for emergencies).
- *UF Health Shands 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 32608; visit <https://ufhealth.org/locations/uf-health-shands-emergency-room-trauma-center>
- *GatorWell Health Promotion Services*: For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, visit the <https://gatorwell.ufsa.ufl.edu/> or call 352-273-4450.

Academic Resources

- *E-learning technical support*: Contact the <https://helpdesk.ufl.edu/> 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, visit <https://career.uf.edu>
- For various ways to receive assistance with respect to using the libraries or finding resources, visit <https://uflib.ufl.edu>
- Visit the UF Teaching Center: Broward Hall, 352-392-2010 or make an appointment 352-392-6420. General study skills and tutoring.
- *Writing Studio*: 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.
- *Student Complaints On Campus*: visit <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code>

Technology: A computer with Respondus Lockdown will be required for taking quizzes and exams in class. The use of cell phones, surfing the web, checking email, making Facebook posts, or anything of that nature is discouraged. Violation of this policy will result in in-class assignment point deductions which will be decided by the course instructor.

Wi-Fi access via eduroam:

Eduroam, the on-campus wi-fi network, is available nationally and internationally. UF students can access eduroam for free with their GatorLink log-in credentials. The eduroam network is fast and secure and has more than 10,000 wi-fi hotspots in 106 countries and territories worldwide. **How to connect to eduroam:**

1. If you can get a Wi-Fi signal at any of the eduroam locations (see below) and your mobile device (laptop, smartphone, or tablet) has already been configured for eduroam, then you will automatically connect.
2. Otherwise, follow the instructions for connecting here: <https://helpdesk.ufl.edu/connecting-to-eduroam-off-campus/>.

Eduroam sites in the U.S.: <https://incommon.org/eduroam/eduroam-u-s-locator-map/>. For problems connecting, you can call (352-392-HELP/4357) or [email](#) the UF Computing Help Desk.

In-Class Recording:

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

Communication: You are responsible for checking announcements and course postings on the course website and listening in class. All course grades will be posted on the course website. Any discrepancies should be pointed out to the instructor on or before the end of the semester.

Academic Honesty: UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. 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.” The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obliged to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult the instructors in this class.

Course Evaluation: 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. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

Inclusion, Diversity, Equity, and Accessibility (IDEA) Resources

We would like to create a learning environment for our students that supports a diversity of thoughts, perspectives and experiences, and honors your identities (including race, gender, class, sexuality, religion, ability, etc.) To help accomplish this:

- If you have a name and/or set of pronouns that differ from those that appear in your official academic records, please let me know!
- If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to come and talk with me. I want to be a resource for you. Remember that you can also submit anonymous feedback (which will lead to me making a general announcement to the class, if necessary to address your concerns).
- We (like many people) are still in the process of learning about diverse perspectives and identities. If something was said in class (by anyone, including the instructor) that made you feel uncomfortable, please talk with me about it. (Again, anonymous feedback is always an option).

Tentative Course Schedule

This is an approximation of course content during the semester. Course content and/or order of presentation may change depending on class needs. Students will be apprised of any changes as soon as they occur.

Class timeline

Introduction Module

August 23 Introduction and overview of the course

August 25 Test Respondus Lockdown (practice quiz), test out MotorLab access

Module 1: Neuroscience Methods

August 28 No in-class meeting, watch Module 1 videos on your own time

August 30 Quiz 1, covers Module 1 videos

September 1 Module 1 In-class assignments

Module 2: Cortical & Subcortical Motor System

September 4, Labor Day, no class

September 6 No in-class meeting, watch Module 2 videos on your own time

September 8 Quiz 2

September 11 In-class assignments

Module 3: Skill Classification and Methodology for Studying Motor Learning & Control

September 13 No in-class meeting, watch Module 3 videos and complete Error Calculation lab on your own time

September 15 Quiz 3

September 18 In-class assignments

Module 4: Motor Learning Concepts

September 20 No in-class meeting, watch Module 4 videos and complete Probe Reaction Time lab on your own time

September 22 Quiz 4

September 25 In-class assignments

Module 5: Human Information Processing: Stimulus Identification

September 27 No in-class meeting, watch Module 5 videos and complete Simon Effect lab on your own time

September 29 Quiz 5

October 2 In-class assignments

Module 6: Human Information Processing: Response Selection and Programming

October 4 No in-class meeting, watch Module 6 videos and complete Donders Subtractive Method and Stimulus Response Compatibility labs on your own time

October 6 Homecoming, no class

October 9 Quiz 6

October 11 In-class assignments

MIDTERM EXAM REVIEW October 13

MIDTERM EXAM October 16 (covers Modules 1 – 6) In-class with Respondus Lockdown

Module 7: Feedback Control I

October 18 4 No in-class meeting, watch Module 7 videos and complete Visual-auditory reaction time lab on your own time

October 20 Quiz 7

October 23 In-class assignments

Module 8: Feedback Control II

October 25 No in-class meeting, watch Module 8 videos and complete Visuomotor adaptation lab on your own time

October 27 Quiz 8

October 30 In-class assignments

Module 9: Feedforward Control

November 1 No in-class meeting, watch Module 9 videos and complete Slater-Hammel Anticipation timing lab on your own time

November 3 Quiz 9

November 6 In-class assignments

Module 10: Coordination

November 8 No in-class meeting, watch Module 10 videos and complete Fitts law lab on your own time

November 10 Veteran's Day Observed, no class

November 13 Quiz 10

November 15 In-class assignments

Module 11: Augmented Feedback

November 17 No in-class meeting, watch Module 11 videos and complete Feedback / Knowledge of Results lab on your own time

November 20 Quiz 11

November 22, 24 Thanksgiving, no class

November 27 In-class assignments

Module 12: Conditions of Practice

November 29 No in-class meeting, watch Module 12 videos and complete Contextual Interference and Practice Variability labs on your own time

December 1 Quiz 12

December 4 In-class assignments

FINAL EXAM REVIEW December 6

FINAL EXAM December 13, 10:00 – 11:30 am, FLG 265