APK6205 Nature and Basis of Motor Performance

Instructor

Stephen Coombes, PhD

Phone Number

352-294-1768

Email

scoombes@ufl.edu

Office Hours

Posted on Canvas or by appointment

Teaching Assistant

N/A

Credit Hours

3

For questions about course content, your grade or other personal issues, use the Canvas mail tool. Expect a response within 24 hours.

Course Information

University of Florida Course Description: Principles relating to development of motor skill, with emphasis on conditions affecting its development and retention in activities.

The course includes 14 modules. All lectures have been recorded and will be available online. Each week you will complete 1 module. Every module includes recorded lectures and a quiz, and some modules also include labs that can be completed online. For example, for module 1, the online lectures and materials will be made available on Monday of the first week of the semester. A discussion board for module 1 will be activated at the same time. The instructor will monitor the discussion board and answer questions within the discussion forum. Students are encouraged to collaborate and interact through the message board. The quiz for module 1 will be completed online through canvas and will be available until Sunday at midnight. Module 2 will then be made available on Monday at 1 am and will follow the same timeline.

TIMELINE: A timeline that includes the dates of each module, required lab assignments, optional lab assignments, the mid-term and the final exam is available <u>here</u> and shown at the bottom of the syllabus.

LABS: Please go the "Lab" page <u>here</u> for more specific instructions. In brief, for the online laboratory experiments you will need to:

1) Download and install the Motorlab software from the following website: https://motorlab.ca/download/ (Links to an external site)

You will be e-mailed a unique license code after the drop add period has finished. The license code can only be used once by you.

2) Download and extract the zipped file which has the instructions, activity, and analysis file for ALL labs. You can download that directly from here. You only need to download once.

Note: You do not need to turn anything in for the lab but you must complete it. There will be questions on the quiz and exams related to the required labs.

Note: "Labs: Optional" are also listed and you are free to complete these as you wish. There will not be questions from optional labs on quizzes/exams.

There will be a mid-term after module 6 and a final exam after module 14.

Students are responsible for checking announcements and course postings on Canvas, which may include updates to the course schedule.

Course Objectives

By the end of this course, you will be able to:

- 1. Differentiate and explain learning theories applicable to skill acquisition and retention
- 2. Apply knowledge of instructional strategies for 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

Course Requirements

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.

Prerequisites

Students must hold Graduate Student classification based on the UF Registrar's class Student Classifications system (https://catalog.ufl.edu/UGRD/academic-regulations/student-classifications/). Or, students must acquire instructor approval.

Minimum technology requirements

The University of Florida expects students entering an online program to acquire computer hardware and software appropriate to his or her degree program. Most computers are capable of meeting the following general requirements. A student's computer configuration should include:

- Webcam
- Microphone
- Broadband connection to the Internet and related equipment (Cable/DSL modem)
- Microsoft Office Suite installed (provided by the university)

Individual colleges may have additional requirements or recommendations, which students should review prior to the start of their program.

Minimum technical skills

To complete your tasks in this course, you will need a basic understanding of how to operate a computer, and how to use word processing software, and how to download and install software.

Honorlock

Honorlock is an online proctoring service that allows students to take exams on-demand 24/7. There are no scheduling requirements or fees.

You will need a laptop or desktop computer with a webcam, a microphone, and a photo ID. The webcam and microphone can be either integrated or external USB devices.

Honorlock requires that you use the <u>Google Chrome (Links to an external site.)</u> browser; furthermore, the Honorlock extension (Links to an external site.) must be added to Chrome.

For further information, FAQs, and technical support, please visit Honorlock.

Zoom

Zoom is an easy to use video conferencing service available to all UF students, faculty, and staff that allows for meetings of up to 100 participants.

You can find resources and help using Zoom at https://ufl.zoom.us.

Course Policies

Attendance Policy: Students are expected to watch every lecture and read and watch all additional materials provided online through the course shell. No points are offered for attendance or participation. Quizzes are offered after the completion of each module and are taken via honorlock on Canvas via a portable electronic device.

Make-up quizzes and exams will be given at the discretion of the instructor. To schedule a make-up quiz or exam, please fill out the make-up exam request form posted in Canvas and e-mail it to your course instructor. The form is available here. Documentation will be required. Unexcused missed quizzes and exams will result in a zero on that item (this includes contacting the instructor after the exam if you are ill). Please make travel arrangements accordingly, as this is not an excusable activity. If you have a serious emergency or life event, please contact the Dean of Students Office (www.dso.ufl.edu) and they will contact your instructor so that you do not have to provide documentation to individual instructors to make-up a quiz or exam. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at

https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/

As this is an online class, you are responsible for observing all posted due dates, and are encouraged to be self-directed and take responsibility for your learning.

Privacy: Our discussions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

Grading Policy

Quiz and exam scores will be uploaded directly into canvas following the completion of each assessment. Labs will not be graded directly, but quiz and exam questions will be directly related to the laboratory experiments. 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 <u>not</u> 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.

Course Grading Policy

Assignment	Points
Midterm Exam	20
Final Exam	25
Quizzes (x14)	35
Capstone Assignment	20
Total Points	100

Midterm: 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, for a total of 20 points. Students are not permitted access to any kind of materials or notes during this assessment. Questions are generated by the course instructor and the majority of focus should be given to the lecture notes when studying. All assessments will be taken through canvas using the honorlock function. Students will be allowed 90 minutes to complete the midterm exam.

Final Exam: Questions will be based on modules 7-14. The final exam will consist of 40-50 multiple-choice and true-false questions, each worth 0.25 to 1.0 point 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 the majority of focus should be given to the lecture notes when studying. All assessments will be taken through canvas using the honorlock function. Students will be allowed 90 minutes to complete the final exam.

Quizzes: There will be a total of 14 quizzes. There will be a quiz after each module is completed. Each quiz will consist of 5-10 questions, for a total of 2.5 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 the majority of focus should be given to the lecture notes and labs when studying. All assessments will be taken through canvas using the honorlock function. Students will be allowed 10 minutes to complete the quiz.

Capstone Assignment. Create a motor learning plan for an individual. The plan must be at least 1500 words (double spaced, font size = 12) and include a minimum of 10 references of published

research articles. You must design a 10-week program with a maximum of 30 hours of contact time with the individual spread over the 10 weeks as you choose. The capstone assignment is worth 20 points. Specific details for the project can be found <u>here</u>.

Extra Credit – No extra credit is offered in this course

Grading Scale

See the <u>current UF grading policies</u> for more information.

Letter Grade	Percent of Total Points Associated with Each Letter Grade	GPA Impact of Each Letter Grade
Α	94.00-100%	4
A-	90.00-93.99%	3.7
B+	87.00-89.99%	3.3
В	84.00-86.99%	3
B-	80.00-83.99%	2.7
C+	77.00-79.99%	2.3
С	74.00-76.99%	2
C-	70.00-73.99%	1.7
D+	67.00-69.99%	1.3
D	60.00-66.99%	1
E (F)	0-59.99%	0

UF Policies

University Policy on Accommodating Students with Disabilities:

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, https://disability.ufl.edu/) by providing appropriate documentation. Once registered, students will receive an accommodation letter that must be presented to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive; therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

University Policy on Academic Conduct:

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 honesty 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. This includes sharing content between class sections, including quizzes and final exam. Honor code violations of any kind will not be tolerated and sanctions will be determined by the course instructor.

Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Netiquette and Communication Courtesy:

All members of the class are expected to follow <u>rules of common courtesy</u> in all email messages, threaded discussions, and chats.

Getting Help

Technical Difficulties:

For issues with technical difficulties for Canvas, please contact the UF Help Desk at:

- http://helpdesk.ufl.edu
- (352) 392-HELP (4357)
- Walk-in: HUB 132

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

Health and Wellness

- U Matter, We Care: If you or someone you know is in distress, please contact <u>umatter@ufl.edu</u>, 352-392-1575, or visit <u>umatter.ufl.edu</u> to refer or report a concern and a team member will reach out to the student in distress.
- Counseling and Wellness Center: Visit <u>counseling.ufl.edu</u> 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 shcc.ufl.edu.
- University Police Department: Visit <u>police.ufl.edu</u> or call 352-392-1111 (or 9-1-1 for emergencies).
- **UF Health Shands Emergency Room/Trauma Center:** For immediate medical care in Gainesville, call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; <u>ufhealth.org/emergency-room-trauma-center</u>.

Academic and Student Support

- Career Connections Center: 352-392-1601. Career assistance and counseling services career.ufl.edu/.
- **Library Support:** Various ways to receive assistance with respect to using the libraries or finding resources. cms.uflib.ufl.edu/ask
- **Teaching Center:** 352-392-2010 General study skills and tutoring: teachingcenter.ufl.edu/
- **Writing Studio:** 352-846-1138. Help brainstorming, formatting, and writing papers: writing.ufl.edu/writing-studio/

Inclusion, diversity, equity, and accessibility Resources

For suggestions or concerns related to IDEA, please reach out to any of the following:

- Dr. Leo Ferreira, APK IDEA Liaison, ferreira@hhp.ufl.edu
- Dr. Rachael Seidler, APK Graduate Coordinator, rachaelseidler@ufl.edu
- Dr. Joslyn Ahlgren, APK Undergraduate Coordinator, jahlgren@ufl.edu

Course Evaluations

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, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

Tips for Success

Taking a course online can be a lot of fun! Here are some tips that will help you get the most of this course while taking full advantage of the online format:

- The suggested (but not required) textbook can be helpful to some but is not required for success in the course. All quizzes and exams will be based on material provided in lectures, discussions, and articles.
- Engage with your peers and engage in the discussion forum. We are one another's greatest resources for learning.

- Look up material that inspires you. If we are talking about internal versus external feedback and you want to apply it to your sport of choice look it up and read about it or watch a video clip! Chances are, this will add to your depth of learning and better allow you to apply the principle to your future endeavors and interests!
- Check Canvas for announcements.
- Schedule "class times" for yourself. Do not watch the lectures last minute. Watch them in advance and use the discussion forum to ask questions and prepare for the quiz/exams. The goal of the quiz is to encourage you to stay on top of the material so you are well prepared for the mid-term and final.
- Print out the Course Schedule located in the Course Syllabus and check things off as you go.
- Take full advantage of the online discussion boards. Ask for help or clarification of the material if you need it.
- Do not wait to ask questions! Waiting to ask a question might cause you to miss a due date.
- To be extra safe, back up your work to an external hard drive, thumb drive or through a cloud service.
- Things happen. That's life. If there are some majorly overwhelming things happening during your semester, send me an email; we'll work together to figure out what steps you should take to help get you through the course.

Privacy and Accessibility Policies

For information about the privacy policies of the tools used in this course, see the links below:

- Instructure (Canvas)
 - o Privacy Policy
 - Accessibility
- Zoom
 - o Privacy Policy
 - o Accessibility
- YouTube (Google)
 - o Privacy Policy
 - Accessibility
- Microsoft
 - Privacy Policy
 - Accessibility
- Adobe
 - Privacy Policy
 - o Accessibility
- Honorlock
 - o Privacy Policy
 - Accessibility

Timeline

					-		
			Discussion board				
			Module				
			Quiz/exam	Quiz/exam			
Week	Module		available from	available until (and due)			Online Labs - Optional
1		Orientation quiz - practice quiz		11:59pm 1/16/22	None		
	1	Motor Neuroscience Methods	1:00am 1/5/22	11:59pm 1/16/22	None		
2	2	Cortical and Subcortical Motor System	1:00am 1/5/22	11:59pm 1/23/21	None		
3	3	Skill classification	1:00am 1/5/22	11:59pm 1/30/21	Error calculation		
4	4	Motor Learning Concepts	1:00am 1/5/22	11:59pm 2/6/22	Probe reaction time	Stimulus-intensity effect	
5	5	Information Processing: Stimulus identification	1:00am 1/5/22	11:59pm 2/13/22	Memory	Simon Effect	
6	6	Information Processing: Response Selection and Programming	1:00am 1/5/22	11:59pm 2/20/22	Donders substractive method	Stimulus-response compatability	Henry & Rogers response complexity Hicks law
7		Mid-Term	1:00am 1/5/22	11:59pm 2/27/22	None		
8	7	Feedback Control I	1:00am 2/28/22	11:59pm 3/6/22	Visual-auditory RT		
9	8	Feedback Control II	1:00am 2/28/22	11:59pm 3/13/22	Visuomotor adaptation		
9	8	Feedback Control II Feedforward Control		11:59pm 3/13/22 11:59pm 3/20/22	Visuomotor adaptation Slater-Hammel Anticipation timing		
_			1:00am 2/28/22				
10	9	Feedforward Control	1:00am 2/28/22 1:00am 2/28/22	11:59pm 3/20/22	Slater-Hammel Anticipation timing		
10	9 10	Feedforward Control Coordination	1:00am 2/28/22 1:00am 2/28/22 1:00am 2/28/22	11:59pm 3/20/22 11:59pm 3/27/22	Slater-Hammel Anticipation timing	Practice varaibility	
10 11 12	9 10 11	Feedforward Control Coordination Augmented Feedback	1:00am 2/28/22 1:00am 2/28/22 1:00am 2/28/22 1:00am 2/28/22	11:59pm 3/20/22 11:59pm 3/27/22 11:59pm 4/3/22	Slater-Hammel Anticipation timing Fitts law feedback/KR	Practice varability	
10 11 12 13	9 10 11 12	Feedforward Control Coordination Augmented Feedback Conditions of Practice	1:00am 2/28/22 1:00am 2/28/22 1:00am 2/28/22 1:00am 2/28/22 1:00am 2/28/22	11:59pm 3/20/22 11:59pm 3/27/22 11:59pm 4/3/22 11:59pm 4/10/22	Slater-Hammel Anticipation timing Fitts law feedback/KR Contenxtual interference	Practice varaibility	
10 11 12 13	9 10 11 12 13	Feedforward Control Coordination Augmented Feedback Conditions of Practice Pain and Movement	1:00am 2/28/22 1:00am 2/28/22 1:00am 2/28/22 1:00am 2/28/22 1:00am 2/28/22 1:00am 2/28/22	11:59pm 3/20/22 11:59pm 3/27/22 11:59pm 4/3/22 11:59pm 4/10/22 11:59pm 4/17/22 11:59pm 4/17/22	Slater-Hammel Anticipation timing Fitts law feedback/KR Contenxtual interference None	Practice varaibility	
10 11 12 13 14 15	9 10 11 12 13	Feedforward Control Coordination Augmented Feedback Conditions of Practice Pain and Movement Prosthetics	1:00am 2/28/22 1:00am 2/28/22 1:00am 2/28/22 1:00am 2/28/22 1:00am 2/28/22 1:00am 2/28/22 1:00am 2/28/22	11:59pm 3/20/22 11:59pm 3/27/22 11:59pm 4/3/22 11:59pm 4/10/22 11:59pm 4/17/22 11:59pm 4/24/22	Slater-Hammel Anticipation timing Fitts law feedback/KR Contenxtual interference None	Practice varability	