UF Department of Applied Physiology and Kinesiology
College of Health and Human Performance
UNIVERSITY of FLORIDA

Nature and Basis of Motor Performance

APK6205c | Class # 26729 | 3 Credits | Fall 2023

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Course Info

INSTRUCTOR

Stephen Coombes, PhD
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Preferred Method of Contact: Canvas/e-mail

OFFICE HOURS

Office hours are by appointment

MEETING TIME/LOCATION

Access course through Canvas on UF e-Learning (https://elearning.ufl.edu/) & the Canvas mobile app by Instructure

COURSE DESCRIPTION

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

PREREQUISITE KNOWLEDGE AND SKILLS

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 TECHNIOLOGY 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.

REQUIRED AND RECOMMENDED MATERIALS

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 FORMAT

The course includes 14 modules. All lectures have been recorded and will be available online. The course is paced based on a 1 or 2 modules per week schedule (although there is the ability to move through the first half and the second half of the course more quickly - which is detailed at the end of this paragraph). In general, 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. Feedback for the quiz will then be available all day on Monday. Module 2 will then be made available on Monday at 1am and will follow the same timeline. While this pacing has been implemented to help keep students on a weekly schedule, I also open up modules 1-6 at the beginning of the semester, so you can move ahead if you like. The only drawback is that quiz feedback will not be released until the Monday after the quiz is due. Also note that modules 7-14 will not open up until the midterm is complete.

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 here and shown at the bottom of the syllabus.

LABS: Please go the the "Lab" page here 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.

CAPSTONE: Student will also be required to complete a capstone project. Specific details for the project are below and can also be found here.

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

COURSE LEARNING 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 & University Policies

ATTENDANCE POLICY

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.

PERSONAL CONDUCT POLICY

Students are expected to exhibit behaviors that reflect highly upon themselves and our University. Outline for them exactly what that means in the context of your course. *You MUST include a statement here about adherence to the UF Student Honor Code and potential consequences of violating that code in your course.*
Suggested wording per the UCC Syllabus Checklist: 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 instructor in this class.

Netiquette and Communication Courtesy: All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions, and chats.

EXAM MAKE-UP POLICY

Make-up quizzes and exams will be given at the discretion of the instructor. 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. 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. **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/ugrad/current/regulations/info/attendance.aspx."**

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.

ACCOMMODATING STUDENTS WITH DISABILITIES

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/students/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. Accommodations are not retroactive; therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

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/.

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 & WELLNESS

- U Matter, We Care: If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575
- Counseling and Wellness Center: https://counseling.ufl.edu/, 352-392-1575
- Sexual Assault Recovery Services (SARS) - Student Health Care Center, 392-1161
- University Police Department, 392-1111 (or 9-1-1 for emergencies) http://www.police.ufl.edu/
- 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; ufhealth.org/emergency-room-trauma-center.

ACADEMIC RESOURCES

- E-learning technical support, 352-392-4357 (select opti on 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml
- Career Connections Center, Reitz Union, 392-1601. Career assistance and counseling. https://career.ufl.edu/
- Library Support, http://cms.uflib.ufl.edu/ask. Various ways to receive assistance with respect to using the libraries or finding resources.
- Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. http://teachingcenter.ufl.edu/
- Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. http://writing.ufl.edu/writing-studio/
- Student Complaints On-Campus: https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/ On-Line Students Complaints: http://distance.ufl.edu/student-complaint-process/

INCLUSION, DIVERSITY, EQUITY, AND ACCESSIBILITY RESOURCES

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

- Dr. Linda Nguyen, APK IDEA Liaison, linda.nguyen@hhp.ufl.edu
- Dr. Rachael Seidler, APK Graduate Coordinator, rachaelseidler@ufl.edu
- Dr. Joslyn Ahlgren, APK Undergraduate Coordinator, jahlgren@ufl.edu

Grading

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. 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.

COURSE GRADING PLOICY

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 here.

Extra Credit – No extra credit is offered in this course

GRADING SCALE

Letter Grade	Percent of Total Points Associated with Each Letter Grade	GPA Impact of Each Letter Grade
A	94.00-100%	4
A-	90.00-93.99%	3.7
B+	87.00-89.99%	3.3
B	84.00-86.99%	3
B-	80.00-83.99%	2.7
C+	77.00-79.99%	2.3
C	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

More detailed information regarding current UF grading policies can be found here: https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/.

Weekly Course Schedule

			Discussion board Module Quiz/exam	Quiz/exam				
Month	**Module**		**available from**	**available until (and due)**	**Online Labs - required**		**Online Labs - Optional**	
Aug		Orientation - practice quiz	1:00am | 8/23/23	11:59pm | 9/3/23	None			
	1	Motor Neuroscience Methods	1:00am | 8/23/23	11:59pm | 9/3/23	None			
Aug	2	Cortical and Subcortical Motor System	1:00am | 8/23/23	11:59pm | 9/10/23	None			
Sep	3	Skill classification	1:00am | 8/23/23	11:59pm | 9/17/23	Error calculation			
Sep	4	Motor Learning Concepts	1:00am | 8/23/23	11:59pm | 9/24/23	Probe reaction time	Stimulus-intensity effect		
Oct	5	Information Processing: Stimulus identification	1:00am | 8/23/23	11:59pm | 10/1/23	Memory	Simon Effect		
Oct	6	Information Processing: Response Selection and Programming	1:00am | 8/23/23	11:59pm | 10/8/23	Donders substractive method	Stimulus-response compatability	Henry & Rogers response complexity	Hicks law
Oct		**Mid-Term (open from Aug 23 - Oct 15)**	1:00am | 8/23/23	11:59pm | 10/15/23	None			
Oct	7	Feedback Control I	1:00am | 10/16/23	11:59pm | 10/22/23	Visual-auditory RT			
Oct	8	Feedback Control II	1:00am | 10/16/23	11:59pm | 10/29/23	Visuomotor adaptation			
Nov	9	Feedforward Control	1:00am | 10/16/23	11:59pm | 11/5/23	Slater-Hammel Anticipation timing			
Nov	10	Coordination	1:00am | 10/16/23	11:59pm | 11/12/23	Fitts law			
Nov	11	Augmented Feedback	1:00am | 10/16/23	11:59pm | 11/19/23	feedback/KR			
Nov	12	Conditions of Practice	1:00am | 10/16/23	11:59pm | 11/26/23	Contenxtual interference	Practice varaibility		
Dec	13	Pain and Movement	1:00am | 10/16/23	11:59pm | 12/3/23	None			
Dec	14	Prosthetics	1:00am | 10/16/23	11:59pm | 12/10/23	None			
Dec		**Final (open from Oct 16 - Dec 15)**	1:00am | 10/16/23	11:59pm | 12/15/23	None			
Assignment		**Due Dec 13**	1:00am | 8/23/23	11:59pm | 12/13/23				

SUCCESS AND STUDY TIPS

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