

# Motor Learning

Connect with HHP



APK 3200 | Class #25546 | 3 Credits | Fall 2023

## Course Information

### INSTRUCTOR

Paul A. Borsa, PhD, ATC

Office: 149 FLG

Office Phone: 352-294-1726

Email: [pborsa@ufl.edu](mailto:pborsa@ufl.edu) (Preferred Method of Contact)

### OFFICE HOURS

MWF period 4 or by appointment

### MEETING TIME/LOCATION

MWF 3<sup>rd</sup> period (9:35 - 10:25am, ARCH 423)

**Course Description:** The course will provide theoretical concepts on how we learn to control our movements and become skilled at performing movements. The course provides background for understanding, analyzing, and teaching skills in sports, rehabilitation and instructional settings with attention given to aspects of psychomotor developments and theoretical models of skill acquisition. Although the emphasis of this course will be behavioral, it will include elements from neurophysiology and neuroscience.

**Prerequisite Knowledge and Skills:** junior standing or above; majors only.

### Course Learning Objectives:

Upon completion of this course, the student will be able to:

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 and Recommended Materials:** Magill, R.A. Motor Learning and Control: Concepts and Application. Boston, MA: McGraw Hill.

**Course Format:** The course will primarily use a traditional classroom lecture format for scheduled class meeting times. Additional lecture material may be available to students on the CANVAS site. Some lectures may be pre-recorded and uploaded to the Modules section on CANVAS as needed. Students are expected to take notes using the lecture notes provided. Lecture notes can be found in the files section.

### Course and University Policies:

**Attendance Policy:** Attendance and punctuality is expected and highly recommended. Make every effort to attend all lectures. Attendance will not directly affect your grade. However, some concepts will be made ONLY during class lecture (**and are not in the lecture notes**) and may be part of your quizzes and examinations.

**Personal Conduct Policy:** Students are expected to exhibit behaviors that reflect highly upon themselves and our University. 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.

**Exam Make-up Policy:** No makeup examinations or quizzes will be given without a serious and/or compelling reason. 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](http://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>."

**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.

**Communication:** You are responsible for checking announcements and course postings on CANVAS. This is how your course instructor will communicate with you. All course grades (quizzes and examinations) will be posted on CANVAS. Any discrepancies should be pointed out to the instructor on or before the last day of finals week.

**Course evaluations:** Students in this class are participating in GatorEvals. This evaluation system is designed to be more informative to instructors so that teaching effectiveness is enhanced and to be more seamlessly linked to UF's CANVAS learning management system. Students can complete their evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluer.com/ufl/>. Thank you for serving as a partner in this important effort.

**Privacy:** Our class sessions may be audio visually recorded for students in the class to refer 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.

For in-class recording, the following statement related to Florida's House Bill 233 is suggested but not mandatory: 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.

### Getting Help:

#### Health and Wellness

- U Matter, We Care: If you or a friend is in distress, please contact [umatter@ufl.edu](mailto: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/>

#### Academic Resources

- E-learning technical support, 352-392-4357 (select opti on 2) or e-mail to [Learning-support@ufl.edu](mailto: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. Ashley Smuder, APK Culture and Engagement Committee Chair, [asmuder@ufl.edu](mailto:asmuder@ufl.edu)
- Dr. Stephen Coombes, APK Graduate Coordinator, [scoombes@ufl.edu](mailto:scoombes@ufl.edu)
- Dr. Joslyn Ahlgren, APK Undergraduate Coordinator, [jahlgren@ufl.edu](mailto:jahlgren@ufl.edu)

### Grading:

Evaluation Components (number of each)	Points	Weighting %
Lecture Exams (6)	380	95
Group Discussions	20	5
Total	400	100

**Lecture Exams:** Questions will be in multiple choice, matching and true/false format. Students are not permitted access to any kind of materials or notes during these exams. Exam questions are generated by the course instructor and the focus should be given to the lecture notes when studying. Exams are NOT cumulative and there is no final comprehensive examination. Students will take exams using printed paper and scantrons.

Exam/Unit	Chapters	Questions/Points Possible	Time allotted (minutes)
1	1-3	30/60	30
2	4-8	50/100	50
3	9-10	20/40	20
4	11-13	30/60	30
5	14-15	20/40	20
6	16-19	40/80	40

**Group Discussions:** Students are required to participate in all discussion board assignments. The quality of engagement in this activity will be noted and graded accordingly. There will be 4 discussion boards posted during the semester each worth 5 pts (4 x 5 = 20pts).

*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.*

*Final grades will NOT be calculated using CANVAS. The instructor will calculate your grade using separate software and uploaded to CANVAS once the final tabulations have been made.*

**Grading Scale:** Quiz and exam scores will be entered or uploaded directly into canvas within 12-24 hrs after completion. If you feel there is an error in grade calculation, please bring it to the attention of the instructor ASAP. "More detailed information regarding current UF grading policies can be found here: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>."

Letter Grade	Percent of Total Points Associated with Each Letter Grade	GPA Impact of Each Letter Grade
A	90.00-100%	4.0
B+	87.00-89.99%	3.33
B	80.00-86.99%	3.0
C+	77.00-79.99%	2.33
C	70.00-76.99%	2.0
D+	67.00-69.99%	1.33
D	60.00-66.99%	1.0
E	0-59.99%	0

### Weekly Course Schedule:

Week	Dates	Lecture Topics	Readings
1	Aug 23-25	<u>Unit 1: Introduction to Motor Skills and Abilities</u> Classification of Motor Skills Measurement of Motor Performance	Ch. 1 Ch. 2
2	Aug 28-Sep 1	Measurement of Motor Performance (continued) Motor Abilities Discussion Board 1	Ch. 2 Ch. 3
3	Sep 4-8	<i>Mon, Sep 4 is a holiday (Labor Day) – no class</i> Motor Abilities (continued)	

4	Sep 11-15	<b>Mon Sep 11: Exam 1 (Unit 1: Ch. 1-3)</b> <u>Unit 2: Introduction to Motor Control</u> Neural Basis for Motor Control	Ch. 4/6
5	Sep 18-22	Motor Control Theories Sensory Components of Motor Control (Vision)	Ch. 5 Ch. 6
6	Sep 25-29	Performance & MC Characteristics of Functional Skills Action Preparation <i>Discussion Board 2</i>	Ch. 7 Ch. 8
7	Oct 2-6	<b>Mon Oct 2: Exam 2 (Unit 2: Ch. 4-8)</b> <u>Unit 3: Attention &amp; Memory</u> Attention as a Limited Capacity Resource <i>Fri, Oct 6 is a Holiday (Homecoming) – no class</i>	Ch. 9 Ch. 10
8	Oct 9-13	Memory Components, Forgetting, and Strategies <b>Fri Oct 13: Exam 3 (Unit 3: Ch. 9-10)</b>	Ch. 10
9	Oct 16-20	<u>Unit 4: Introduction to Motor Skill Learning</u> Defining & Assessing Learning Stages of Motor Learning	Ch. 11 Ch. 12
10	Oct 23-27	Stages of Motor Learning (continued) Transfer of Learning <b>Fri Oct 27: Exam 4 (Unit 4: Ch. 11-13)</b>	Ch. 12 Ch. 13
11	Oct 30-Nov 3	<u>Unit 5: Instruction &amp; Augmented Feedback</u> Demonstration & Verbal Instructions Augmented Feedback	Ch. 14 Ch. 15
12	Nov 6-10	Augmented Feedback (continued) <i>Discussion Board 3</i> <i>Fri, Nov 10 is a holiday (Veterans Day) – no class</i>	Ch. 15
13	Nov 13-17	<b>Mon Nov 13: Exam 5 (Unit 5: Ch. 14-15)</b> <u>Unit 6: Practice Conditions</u> Practice Variability	Ch. 16
14	Nov 20-24	The Amount & Distribution of Practice <i>Wed-Fri, Nov 22-45 is a Holiday...no classes (Thanksgiving Break)</i>	Ch. 17
15	Nov 27-Dec 1	The Amount & Distribution of Practice Whole & Part Practice <i>Discussion Board 4</i>	Ch. 17 Ch. 18
16	Dec 4-6	Mental Practice <b>Wed Dec 6: Exam 6 (Unit 6: Ch. 16-19)</b>	Ch. 19

\*Dates for exams are tentative and are subject to change at the discretion of instructor

#### Success and study tips:

- Read and familiarize yourself with all aspects of the course syllabus
- Complete required readings from the chapters in the textbook, watch pre-recorded lectures and take impeccable notes, and attend synchronous lectures/office hours on a regular basis
- Learning over time approach will help with comprehension of course material