

USC Dornsife
College of Letters,
Arts and Sciences

**HBIO400 –Motor Control and Learning (4 units) Spring
2020**

Lecture: M/W/F 1:00-1:50 p.m.
Location: SOS B2

Laboratory:

Location: PED 203

- Section number 38462R
Time 5:00-7:50 p.m.
Day Tuesday
- Section number 38463R
Time 2:00-4:50 p.m.
Day Tuesday
- Section number 38464R
Time 2:00-4:50 p.m.
Day Wednesday
- Section number 38465R
Time 11:00-1:50 p.m.
Day Thursday
- Section number 38466R
Time 2:00-4:50 p.m.
Day Monday

Instructor: Gioia Polidori, PhD
Office: AHF B40
Telephone: (213)740-3337
email: gpolidor@usc.edu
Office Hours: Monday and Friday 2-4pm

Lab Instructor: Gudrun Bára Floyd, M.S.
Office: PED 109b
Telephone: (213) 821-1871
email: gbfloyd@usc.edu
Office Hours: TBD

Course Description:

Theories and principles of learning applied to gross motor performance; analysis and evaluation of variables affecting learning and performance in exercise, games, sports, and dance.

Learning Objectives

- Identify and discuss the function of components involved with sensation, perception, movement preparation and execution as they contribute to the execution of motor skills
- Apply knowledge in motor control and learning to optimize learning and performance
- Apply knowledge of motor control and learning as well as analytical and experimental skills to produce integrative original work
- Correctly use proper statistical, mathematical, laboratory and computational tests
- Identify, explore, assess and solve real world problems through independent study and self-directed group projects that apply the scientific method
- Assemble sources of scientific evidence to develop and present an original hypothesis
- Apply the knowledge in motor learning and control to promote skill acquisition in special populations
- Discuss how various aspects of human diversity, such as race, age, disability, gender, ethnicity and ancestry, affect motor control and learning

I. Required Texts:

Motor Learning and Performance, from principles to application. 5th edition. Schmidt and Lee Human Kinetics.

Laboratory Manual for Motor Control and Learning by Matveyenko, M.

II. Grading Outline

Assignment	Points	% of Grade
Midterm 1	200	20
Midterm 2	250	25
Laboratory	250	25
Final	250	25
Quizzes	50	5
TOTAL	1000	100
JEP (Extra Credit)	25	2.5

- The grading scale is based on the traditional scale as follows:

	A (≥93%)	A- (≥90%)
B+ (≥87%)	B (≥83%)	B- (≥80%)
C+ (≥77%)	C (≥73%)	C- (≥70%)
D+ (≥67%)	D (≥63%)	D- (≥60%)
F (≤59.9%)		

III. Description and Assessment of Assignments/Exams

- Class material will be evaluated via quizzes and exams.
- Lab material will be evaluated via lab assignments, projects, presentations and exams.
- Quizzes will be given during lectures and will be based on the material discussed. Quizzes are intended to be a learning tool and thus are only meant for students that attend lectures. Submitting a quiz from home is considered plagiarism and will be reported to SJACS. Please contact Dr. Polidori if you have to miss a lecture and would like to be excused from taking the quiz.
- Exams will not be given a letter grade. Only the final grade will be given a letter grade.
- A request to take a make-up midterm exam must be accompanied by evidence of necessity (ie: letter from a doctor) and must be made before the date of the scheduled exam. Make-up exams may be proctored by personnel who do not have extensive knowledge in the area being tested.

IV. Blackboard

- Blackboard will be used to post announcements, handouts, articles, rubrics, deadlines, feedback to quizzes and midterm exams so check this site periodically.
- Lecture slides will be posted on blackboard, however, please do not rely entirely on slides, these are meant as a starting point for note-taking. Class notes and textbook information will form the basis of the material that will be on the exams.
- Blackboard automatically calculates a “total grade”, please ignore this as it is not a weighted grade and thus it is an overestimation of the actual grade.

V. Tentative Lecture Schedule

Date	Lecture Topic	Reading	Laboratory
Jan 13	Introduction		Intro
Jan 15	Skills	1	
Jan 17	Motor Skills	1	
Jan 20	MLK Day		Reaction Time
Jan 22	Active Learning I		
Jan 24	Measurement of Motor Performance	notes	
Jan 27	Decision Making	2	EEG
Jan 29	Memory Systems	2	
Jan 31	Attention	3	
Feb 3	Attention and Performance	3	Reflexes
Feb 5	Review		
Feb 7	Midterm I	4	
Feb 10	Sensory Information I	4	Vision
Feb 12	Sensory Information II	4	
Feb 14	Sensory Information III	4	
Feb 17	Presidents' Day		Movement Complexity
Feb 19	Active Learning II		
Feb 21	Motor Control Theories I	5	
Feb 24	Motor Control Theories II	5	Progress Report
Feb 26	Motor Control Theories III	5	
Feb 28	Active Learning III		
Mar 2	Speed and Accuracy	5	Fitt's Law
Mar 4	Performance	6	
Mar 6	Coordination	6	
Mar 9	Individual differences I	7	Motor Abilities
Mar 11	Individual differences II	7	
Mar 13	Individual differences III	7	
Mar 16	Spring Recess		No Lab
Mar 18	Spring Recess		
Mar 20	Spring Recess		
Mar 23	Review		Project Learning
Mar 25	Midterm II		
Mar 27	Motor Learning	8	
Mar 30	Assessment of Motor Learning	8	

Apr 1	Transfer of Learning	8	
Apr 3	Stages of Learning	9	
Apr 6	Active Learning IV	9	Massed vs. distributed Practice
Apr 8	Skill Acquisition	9	
Apr 10	Practice	9	
Apr 13	Amount and Distribution of Practice	9	
Apr 15	Whole and Part Practice	9	
Apr 17	Variable and Constant Practice	10	Feedback
Apr 20	Active Learning V	10	
Apr 22	Instructions and Demonstrations	10	
Apr 24	Mental Practice	10	Presentations
Apr 27	Augmented Feedback I	11	
Apr 29	Augmented Feedback II	11	
May 1	Review		
May 2-5	Study Days		
	Exam: see schedule of classes		

VI. Statement on Academic Conduct and Support Systems

Statement on Academic Conduct and Support Systems

Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, policy.usc.edu/scientific-misconduct.

Support Systems:

Counseling and Mental Health - (213) 740-9355 – 24/7 on call

studenthealth.usc.edu/counseling

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call

suicidepreventionlifeline.org

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-9355(WELL), press "0" after hours – 24/7 on call

studenthealth.usc.edu/sexual-assault

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED) - (213) 740-5086 | Title IX – (213) 821-8298

equity.usc.edu, titleix.usc.edu

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298

usc-advocate.symplicity.com/care_report

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity |Title IX for appropriate investigation, supportive measures, and response.

The Office of Disability Services and Programs - (213) 740-0776

dsp.usc.edu

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Campus Support and Intervention - (213) 821-4710

campussupport.usc.edu

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (213) 740-2101

diversity.usc.edu

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

dps.usc.edu, emergency.usc.edu

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call

dps.usc.edu

Non-emergency assistance or information.

Office of the Ombuds - (213) 821-9556 (UPC) / (323-442-0382 (HSC)

ombuds.usc.edu

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.