# Advanced Motor Learning and Performance

Instructor:Matthew W. Miller, Ph. D.

Email: mwm0024@auburn.edu (I usually respond to email 8 AM – 3 PM on weekdays)

Virtual Office Hours (when I will be in my Zoom Office Hours Meeting):

 Wednesday 12 – 2 PM and by appointment (Meeting ID: 545 460 3288)

Office Location:Kinesiology, Room 164

Course Number: KINE 7650-001

Class Meeting:Tuesday and Thursday, 12:30 – 1:45 PM, SAC 253

Credit Hours: 3.000

Texts/Resources: Textbook: Hodges, N. J., & Williams, A. M. (Eds.). *Skill Acquisition in Sport: Research, Theory and Practice* (3rd ed.). New York: Routledge. ISBN: 9780815392842

Other Readings: The textbook will be supplemented with mandatory journal article readings posted on Canvas.

Course Description: Theories, experimental studies, and current issues in the acquisition, performance, and retention of motor skills.

Learning Outcomes: Students will become familiar with the current state of theories related to motor learning and performance, and students will be able to critically evaluate these theories.

Learning Objectives: Students will become familiar with current theories of motor learning and performance through lectures as well as textbook and non-textbook readings. Students will critically evaluate these theories in guided class discussions.

Justification for Graduate Credit: Students will be challenged to critically evaluate theories motor learning and performance to develop their own reasoned explanations of learning and performance.

## Course Content and Dates (SUBJECT TO CHANGE)

|  |  |
| --- | --- |
| Week | Lectures/Discussions |
| 08/19 – 23 | Introduction to ClassMotor Learning Research Methods* Read Kantak & Winstein (2012)
* Kantak & Winstein Quiz
 |
| 08/26 – 30 | Motor Learning Research Methods* Read Lohse, Buchanan, & Miller (2016)
* Lohse, Buchanan et al. Quiz

Focus of Attention* Read Beilock, Carr, MacMahon, & Starkes (2002)
* Beilock et al. Quiz
 |
| 09/02 – 06 | Focus of Attention* Read Lohse, Jones, Healy, & Sherwood (2014)
* Lohse, Jones et al. Quiz
* Prepare for Focus of Attention Discussion
 |
| 09/09 – 13 | Constraints-Led Approach to Practice and Transfer* Read Ch. 9
* Ch. 9 Quiz
* Read Ch. 18
* Ch. 18 Quiz
 |
| 09/16 – 20 | Constraints-Led Approach to Practice and Transfer* Read Ch. 11
* Ch. 11 Quiz
* Read Gray (2018)
* Gray Quiz
 |
| 09/23 – 27 | Constraints-Led Approach to Practice and Transfer* Prepare for Constraints-Led Approach to Practice and Transfer Discussion

Motivation, Practice Difficulty, Implicit Learning, and Expecting to Teach* Read Wulf & Lewthwaite (2016)
* Wulf & Lewthwaite Quiz
 |
| 09/30 – 10/04 | Motivation, Practice Difficulty, Implicit Learning, and Expecting to Teach* Read Ch. 7
* Ch. 7 Quiz
* Read Ch. 3
* Ch. 3 Quiz
 |
| 10/07 – 11No Class 10/10 | Motivation, Practice Difficulty, Implicit Learning, and Expecting to Teach* Read Ch. 17
* Ch. 17 Quiz
 |
| 10/14 – 18 | Motivation, Practice Difficulty, Implicit Learning, and Expecting to Teach* Read Ch. 6
* Ch. 6 Quiz
* Read Ch. 5
* Ch. 5 Quiz
 |
| 10/21 – 25 | Motivation, Practice Difficulty, Implicit Learning, and Expecting to Teach* Read Cabral et al. (2023)
* Cabral et al. Quiz
* Prepare for Motivation, Practice Difficulty, Implicit Learning, and Expecting to Teach Discussion
 |
| 10/28 – 11/01 | Motor Imagery, Action Observation, and Perceptual-Cognitive Expertise* Read Ch. 4
* Ch. 4 Quiz
* Read Ch. 13
* Ch. 13 Quiz
 |
| 11/04 – 08 | Motor Imagery, Action Observation, and Perceptual-Cognitive Expertise* Read Aglioti, Cesari, Romani, & Urgesi (2008)
* Aglioti et al. Quiz
* Read Kardas & O’Brien (2018)

Kardas & O’Brien Quiz |
| 11/11 – 15 | Motor Imagery, Action Observation, and Perceptual-Cognitive Expertise* Prepare for Motor Imagery, Action Observation, and Perceptual-Cognitive Expertise Discussion

Deliberate Practice and Skill Development* Read Ch. 10
* Ch. 10 Quiz
 |
| 11/18 – 22 | Deliberate Practice and Skill Development* Read Ch. 19
* Ch. 19 Quiz
* Read Fortin-Guichard et al. (2023)
* Fortin-Guichard et al. Quiz
 |
| 11/25 – 29No Class |  |
| 12/02 – 06 | Deliberate Practice and Skill Development* Prepare for Deliberate Practice and Skill Development Discussion
* Make-Up Class or No Class
 |

## Assignments:

### Quizzes (50% grade)

There will be 21 quizzes (no unannounced quizzes), each with 5 questions and a 10-minute time limit. All quizzes will be completed through Canvas during class, so ensure that you bring a device, such as a laptop, tablet, or smartphone, that you can use to complete a quiz when we have one. Attendance will be taken on the day of a quiz, and I will only accept quiz submissions from students who are present, meaning that you may not attempt to take the quiz outside class time. Quizzes are closed source, meaning that you may not use anything other than what you have stored in your brain to complete them. The purpose of the quizzes is to ensure that students are completing and understanding their reading assignments before the class meeting about each reading. Therefore, the quizzes will be taken at the start of the class meeting related to the reading.

### Discussion (50% of grade)

In the class meeting after we conclude a topic, you and your classmates will be asked to verbally answer discussion questions. Each class member will be asked to respond to one of several discussion questions that are presently listed on Canvas. Discussion questions will be randomly assigned at the start of the class meeting, so you must prepare to answer each discussion question. Your preparation may include jotting down some notes about your thoughts related to each question, but you could also write out complete responses to read in class, or you could just take mental notes about your thoughts related to each question. Your response will be worth 10 points, and your grade will be determined by the degree to which you make logical, fact-based responses.

## Grading:

Percentages will be associated with the following letter grades:

 A: 90.0% ≤

 B: 80.0% ≤

 C: 70.0% ≤

 D: 60.0% ≤

 F: 60.0% >

Students may withdraw without grade penalty until the 15th class day, and until mid-semester (although a W will appear on the student’s transcript if the student withdraws between the 16th and 36th class day).

Students who withdraw from the course between the 6th class day and the 15th class day will pay a course drop fee of $100.

## Class Policies:

Attendance: Although attendance is not required, students are expected to attend all classes, and will be held responsible for any content covered in the event of an absence.

Excused Absences: Students are granted excused absences from class for the following reasons: Illness of the student or serious illness of a member of the student’s immediate family, death of a member of the student’s immediate family, trips for student organizations sponsored by an academic unit, trips for University classes, trips for participation in intercollegiate athletic events, subpoena for a court appearance and religious holidays. Students who wish to have an excused absence from this class for any other reason must contact the instructor in advance of the absence to request permission. The instructor will weigh the merits of the request and render a decision. When feasible, the student must notify the instructor prior to the occurrence of any excused absences, but in no case shall such notification occur more than one week after the absence. Appropriate documentation for all excused absences is required.

Make-Up Policy: Arrangements to make up missed major examination (e.g. hour exams, mid-term exams) due to properly authorized excused absences. Except in unusual circumstances, such as continued absence of the student or the advent of University holidays, a make-up exam will take place within two weeks from the time the student initiates arrangements for it. Except in extraordinary circumstance, no make-up exams will be arranged during the last three days before the final exam period begins. The format of the make-up exam will be (as specific by the instructor).

Academic Honesty Policy: All portions of the Auburn University Student Academic Honesty code (Title XII) found in the [Student Policy eHandbook](http://www.auburn.edu/student_info/student_policies/)will apply to this class. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee.

Disability Accommodations: Students who need accommodations are asked to electronically submit their approved accommodations through AU Access and to make an individual appointment with the instructor during the first week of classes – or as soon as possible if accommodations are needed immediately. If you have not established accommodations through the Office of Accessibility, but need accommodations, make an appointment with the Office of Accessibility, 1228 Haley Center, 844-2096 (V/TT).

Class Communication: Communication will occur via Canvas. If you are new to Canvas, please see this link to a 7 minute: [“Getting Started with Canvas” video (and transcript)](https://vimeo.com/74677642). Communication via Canvas will appear in your Auburn email and on Canvas. You are responsible for regularly checking class emails and Canvas.

Emergency Contingency: If normal class and/or lab activities are disrupted due to illness, emergency, or crisis situation, the syllabus and other course plans and assignments may be modified to allow completion of the course. If this occurs, an addendum to your syllabus and/or course assignments will replace the original materials.

Professionalism: The Auburn University Classroom Behavior Policy is strictly followed in the course; please refer to the [Student Policy eHandbook](http://www.auburn.edu/student_info/student_policies/) for details of this policy.

## Mental Health:

If you are experiencing stress that feels unmanageable (personal or academic) during the semester, Auburn University’s Student Counseling & Psychological Services (SCPS) offers a variety of services to support you. The mission of SCPS is to provide comprehensive preventative and clinical mental health services to enhance the psychological well-being of individual students, as well as the broader campus culture. As an instructor, I am available to speak with you regarding stresses related to your work in this course, and I can assist in connecting you with the SCPS network of care. You can schedule an appointment yourself with the SCPS by calling (334)844-5123 or by stopping by their offices on the bottom floor of Haley Center or the second floor of the [Auburn University Medical Clinic.](http://auburn.edu/map/?id=150)

If you or someone you know needs to speak with a professional counselor immediately, the SCPS offers counseling during both summer term as well as the traditional academic year. Students may come directly to the SCPS and be seen by the counselor on call, or you may call 334.844.5123 to speak with someone. Additional information can be found at <http://wp.auburn.edu/scs>.

## Bias, Incidents, Concerns, or Complaints:

For information about reporting concerning or worrisome behavior, a student conduct violation, hazing, crimes, or academic, non-academic, or general complaints, please visit <https://studentaffairs.auburn.edu/complaint-concern/>.

Regarding bias, Auburn University values freedom of expression and the open exchange of ideas. While openness protects the expression of controversial ideas, there are times when actions or expression can negatively affect individuals or groups. A bias-related incident involves conduct (acts, behaviors, or communications) against a person, motivated by the offender’s biases regarding age, disability, ethnicity, gender, gender identity/expression, nation origin/nationality, race, religion, sex, sexual orientation, veteran status or other identity. These acts, behaviors, conduct or communications may produce an unwelcoming environment. A bias incident may involve behavior which does not rise to the level of a violation of Auburn University policy, including legally protected free speech.

The Bias Education and Response Team (BERT) consists of a cross-disciplinary group of staff and faculty who will ensure that students, faculty, and staff have the means to report bias incidents. This group of professionals share information about incidents reported to the BERT, and advocate for prevention and awareness programs. BERT members will also connect those impacted by bias-related incidents with immediate and ongoing support resources. Students can report a bias incident at <https://studentaffairs.auburn.edu/bert/>.