# **KINE 3651-D02 Motor Learning and Performance Lab – Syllabus**

**School of Kinesiology**

**Auburn University**

**Spring 2022**

## **Course details:**

**Course number:** KINE 3651 – D02

**Course title:** Motor Learning and Performance Lab

**Course meetings:** Online Asynchronous

**Credit hour:** 1.00

**Prerequisites:** None

**Corequisite:** KINE 3650 - Motor Learning and Performance (Credit hour: 3.0)

## **Contact information:**

**Lecture instructor:** Mariane Bacelar, M.S. (she/her)

**Email:** [mzf0029@auburn.edu](mailto:mzf0029@auburn.edu)

**Office location:** Kinesiology Building 138 (School of Kinesiology, 301 Wire Rd., Auburn/AL)

**Office hours:** Wednesdays 12 – 1 PM (when I will be on zoom [link can be found on Canvas] to meet with students). If you prefer an appointment, I am happy to meet with you between the hours of 8 AM and 5 PM, Monday through Friday. Please send me an email proposing at least two days/times that work for you. Grades will not be discussed by email and require a meeting.

## **Course description:**

Lab experience will allow students to gain first-hand experience with modern experimental methods, data collection, and basic analysis tools in motor learning research, and develop an understanding of the experience of human research participants in kinesiology research.

## **Learning outcomes:**

At the end of this course, students will be able to:

* Identify key research methods elements (e.g., validity, reliability, dependent, independent, and confounding variables, experimental and control groups, and research question).
* Calculate and discuss the use of different types of errors and measures commonly adopted in motor learning research and assessments.
* Describe the implications of influencing the stages of information processing in response time through changes in the context and task.
* Describe the use of electroencephalography and its variables in motor learning and performance research.
* Discuss the effects of contextual interference and practice variability in motor performance and learning, and design effective practice sessions based on these concepts to facilitate performance and learning in more naturalistic settings.
* Describe the effects of different types of feedback on motor performance and learning as function of task and level of expertise.

## **Required Materials**

A laptop or computer with Microsoft Word and Excel, with the capability to play videos (lecture recordings posted for each module) and to install/run the MotorLab app. The MotorLab license code will be acquired when the student purchases the course material through the AU bookstore. MotorLab can be installed following the step-by-step instructions on <https://motorlab.ca/download/>. After you choose the correct version for your device and launch the program, insert your unique license code from the Bookstore to access the motor tasks.

**Copyright/ Intellectual Property of Course Material:**

The MotorLab app license number shall not be shared and is for exclusive use of the student who purchased the license. PowerPoints, recordings, and files posted by the instructor or submitted by students shall not be shared, sold, posted on the internet, or used by other means unrelated to this course.

## **Course content and schedule**

|  |  |  |
| --- | --- | --- |
| **Available from:** | **Deadline:** | **Module/Content** |
| 01/12 | 01/28 | Lab 1 - Introduction, scientific terms, and experimental methods |
| 01/28 | 02/18 | Lab 2 - Understanding accuracy and precision (consistency) |
| 02/18 | 03/18 | Lab 3 - Information processing |
| 03/14 | 04/01 | Lab 4 - Electroencephalography (EEG) |
| 03/28 | 04/15 | Lab 5 - Practice scheduling |
| 04/11 | 04/29 | Lab 6 - Providing feedback |

## **Evaluation:**

**Grading:**

Assessments contribute as follows to final class grade:

|  |  |
| --- | --- |
| **Assessments** | **Percentage** |
| Lab Assignments | 50% |
| Experience of human research participants | 50% |
| Total | 100% |

Grades in the course are based on the following point system.

|  |  |
| --- | --- |
| **Percentage of points accumulated** | **Final grade** |
| 90 – 100% | A (4.0) |
| 80 – 89.99% | B (3.00) |
| 70 – 79.99% | C (2.00) |
| 60 – 69.99% | D (1.00) |
| Below 60% | F (0.00) |

**\*NOTE: Only final grades with .5 or above will be rounded up. Therefore, an 87.5 will become an 88, while an 87.44 will become an 87.**

**Description of the assessments:**

Lab Assignments

There will be six lab assignments worth 10 points each. All assignments consist of worksheets that must be completed (i.e., typewritten) and submitted by the due date though Canvas. The content of the individual lab assignments varies depending on the topic covered by each module. Both course material (video recordings, PowerPoints, files) and hands-on activities are important, and the lab assignments shall be based on the content being taught as well as on your OWN results from the motor tasks completed on the app. Therefore, make sure you fully watch the video recordings for each module ***and*** perform the MotorLab task(s) required prior to completing the assignment. The assignments must be submitted anytime between 12 a.m. of the opening date and 11:59 p.m. of the deadline. Refer to the course scheduled for a detailed description of the topics, availability, and due dates of each module. Additional materials that might need to be submitted for a particular lab assignment will be indicated by the instructor on Canvas.

Experience of human research participants

This assignment constitutes the remaining 50% of your final lab grade, and is due by **04/29 at 11:59 p.m**. The only way that research in motor learning and performance moves forward is by the voluntary participation of human research participants. Participants are key stakeholders in the research process who sacrificed their time and, in some cases, put their health/safety at varying degrees of risk to advance scientific knowledge. As such, a key part of this lab is to give students a deeper appreciation of the value and experience of human research participants. For our lab, this understanding of the human research experience can be gained in two ways: **(1) active participation in research** and/or **(2) reading about published experiments and writing papers explaining the experience of participants in those studies.** Each research participation is worth a number of credits, and each paper is worth up to 2 credits. **You must accumulate 6 credits**. You can earn credits by (1) participating in research **AND/OR** (2) by writing research papers (see details below). Your grade will be based on how many credits you complete (e.g., if you complete 3 credits, then you will receive half of the points in this assignment).

1. **Participation in research**
   1. You should have received an email from the College of Education’s SONA system, which coordinates human subjects research. **PLEASE MAKE SURE THAT YOU ARE ON THE COLLEGE OF EDUCATION’S SONA SYSTEM** (The Department of Psychology also has a separate SONA system.) The email contained a temporary password, which you can use to log on to SONA: <https://auburn-education.sona-systems.com/Default.aspx?ReturnUrl=%2f> . If you cannot locate this email, please visit the SONA website (see link above) and request a new password. If you are continuing to have difficulty logging on to SONA, please contact the SONA administrator at [sona@auburn.edu](mailto:sona@auburn.edu) .
   2. Once logged on to SONA, you can sign up for studies worth varying amounts of credit. MAKE SURE THEY ARE OFFERING CREDITS, not money only.
   3. There are also studies that are being conducted that are not posted on SONA. You may complete these studies. If you complete one of these studies, please have the experimenter indicate your participation on the signature sheet at the end of this syllabus. Each half-hour of participation is equal to 1 credit.
   4. **If a study is posted on SONA, you must register for it through SONA. That is, you *cannot* email the researcher and have them complete the signature sheet at the end of the syllabus.**
   5. You cannot use research participation for more than one course. That is, you cannot participate in research and apply the credit to this course and another course. Make certain you choose to assign the SONA credits to this course (KINE 3651).
   6. **All of your participation credits must come from laboratory-based studies (as opposed to online surveys).**
   7. If you get your credits through the SONA system, SONA will submit a report to me by the end of the term with the number of credits you assigned to this course. Therefore, you do not need to submit any further proof or document. However, if you used the signature sheet, you need to **scan and submit it through Canvas.**
2. **Research paper**

Write a research paper that describes the research methods of a primary research article (ask your lab instructor if you are unsure whether an article is ‘primary’) published in one of the following journals: [*Human Movement Science*](https://www.journals.elsevier.com/human-movement-science/); [*Journal of Experimental Psychology: Human Perception & Performance*](http://www.apa.org/pubs/journals/xhp/); [*Journal of Motor Behavior*](http://www.tandfonline.com/loi/vjmb20); [*Journal of Sport and Exercise Psychology*](http://journals.humankinetics.com/journal/jsep); [*Psychology of Sport and Exercise*](https://www.journals.elsevier.com/psychology-of-sport-and-exercise/); [*Sport, Exercise, and Performance Psychology*](http://www.apa.org/pubs/journals/spy/) (see the Student Resources section below). Specifically, in your paper, you must **clearly include** the following (use the sections below as a template for your paper):

1. **Introduction:**
   1. Background about the topic. Make sure to describe any key terms the reader needs to understand the work.
   2. Detail the goal of the experiment. Why was the study carried out?
2. **Methods:**
   1. Who were the participants and how were they selected? Make sure to describe the inclusion criteria.
   2. Describe participants’ experience as subjects in the study. Specifically, briefly detail the experiment procedures (how the experiment was conducted), how long participants were in the lab, whether the procedures were invasive, and whether procedures placed the participants at risk.
3. **Results/Conclusion:**
   1. Describe the main results of the paper.
   2. How do the conclusions from this paper further our knowledge about motor performance and/or learning?
   3. Do you believe the benefits of the study (the information gained from the study) outweighed the costs to the participants (the time and effort put forth by participants as well as the risk they took by participating)?
   4. Would you consider participating in this study as a subject?
4. **References**
   1. Reference entry for the paper your selected in APA formatting style ([Link](https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/reference_list_basic_rules.html)).

Your paper should not exceed 500 words. Each of the four requirements in the paper is worth 0.5 credits. If you successfully meet all four requirements, then you will earn 2 credits. Your assignment must be typed and submitted through Canvas by the due date.

## **Distance Learning Statement:**

Since this course will take place online, the instructor will be available by way of email and appointment for any questions, concerns, explanations, or discussions. If clarification is needed for any assignment, students can discuss with the instructor by email or appointment. Students are encouraged to ask questions and seek extra help on a regular basis. Please do not wait until the day before an exam or assignment is due.

## **Student Resources:**

Through the Auburn University Libraries (<https://www.lib.auburn.edu/>) it is possible to gain free access to most Scientific Journals you might need for this class. If you are struggling to find or access a paper of your interest, you are encouraged to talk to a librarian at the “Chat with us” section of the aforementioned website or to contact the librarian of the College of Education, Mr. Todd Shipman ([tas0011@auburn.edu](mailto:tas0011@auburn.edu)). It is unlikely that you need to pay for the article of your choice and, if you do, I encourage you to look for the free ones instead. If you feel writing is an area that you are deficient, you are encouraged to contact the AU Office of University Writing at <http://wp.auburn.edu/writing> and seek for help.

## **Course policies:**

By remaining enrolled in this course, you agree to abide by all course policies. All policies set forth in the Student Policy Handbook apply to this course. (<http://www.auburn.edu/student_info/student_policies/>).

### **Academic Honesty**

All assignments, quizzes, and exams are to be completed ALONE. However, students are permitted to use notes and textbook to complete assignments. Copying answers from the internet is forbidden. All portions of the Auburn University student academic honesty code (Title XII) found in the Auburn University Student Policy [eHandbook](http://www.auburn.edu/studentpolicies) ([www.auburn.edu/studentpolicies](file:///C:\Users\brocksj\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\8BRIC6BA\www.auburn.edu\studentpolicies)) 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. If you have ANY concerns regarding to the academic integrity of your work, please contact the instructor.

### **Plagiarism and Academic Dishonesty**

Auburn University’s Student Academic Honesty Code ([link](https://www.auburn.edu/academic/provost/academic-honesty/_assets/pdf/academic-honesty-code-20201028.pdf)) applies to all assignments in this course and, as such, any form of plagiarism or dishonesty will not be accepted and will be reported to the Academic Honesty Committee. BE AWARE OF WHAT CONSTITUTES PLAGIARISM AND CHEATING. Plagiarism includes, but is not necessarily limited to, using words or ideas of another (person or website) as one’s own or directly copying another person’s complete sentence, syntax, keywords, or specific or unique ideas and information without proper documentation. Any assignment including plagiarism will be graded zero (0).

### **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, the 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 are encouraged to notify the instructors prior to the occurrence of any excused absences. However, when not feasible, such notification must occur **within a week after the absence**. Appropriate documentation for all excused absences is required. Please refer to the Auburn University Student Policy eHandbook at the following link [www.auburn.edu/studentpolicies](http://www.auburn.edu/studentpolicies) for more on information on excused absences.

### **Make-up policy:**

Students are only guaranteed the opportunity to make up assignments due to excused absences (i.e., students are not guaranteed the opportunity to make up assignments due to unexcused absences). Arrangement to make up missed assignments due to properly authorized excused absences must be initiated by the student within one week from the end of the period of the excused absences. The due date and time for all assignments are clearly listed here and on Canvas. **It is the students’ responsibility to adhere to these requirements.**

### **Communication:**

All official communication for this class will be made through the university’s official means of communication, Tigermail, and via Canvas, the latter being the best way to contact me. I aim to respond to all email within 48 hours; however, this is not always possible. If your concern is urgent and I do not respond within 3 days, please forward your original email with a friendly reminder. Emails sent during the weekend will not be answered until the next working day. Students are expected to communicate with the instructor in a professional manner. At a minimum, use a clear subject line, with course and section number (e.g., KINE 3650-001), as well as your name and any other information that may help to address your problem/concern. If you have questions about how to write a proper email, click [here.](https://www.insidehighered.com/views/2015/04/16/advice-students-so-they-dont-sound-silly-emails-essay) You are encouraged to check your email and Canvas regularly.

### **Professionalism:**

As faculty, staff, and students interact in professional settings, we are expected to demonstrate professional behaviors as defined in the College of Education conceptual framework. These professional commitments or dispositions are listed below:

* Engage in responsible and ethical professional practices;
* Contribute to collaborative learning communities;
* Demonstrate a commitment to diversity;
* Model and nurture intellectual vitality.

### **Emergency Contingency**

If normal class 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.

## **Disability accommodations**

Students who need accommodations are asked to electronically submit their approved accommodations through AU Access and to arrange a meeting during office hours the first week of classes, or as soon as possible if accommodations are needed immediately. If you have a conflict with our office hours, an alternate time can be arranged. To set up this meeting, please contact us by e-mail. 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). Please note that accommodations are not retroactive. Accommodations begin after: (1) a meeting with the Office of Accessibility to determine appropriate accommodations; and (2) a meeting with the Instructor arranged by the student.

## **Personal note from the instructor**

As people who truly care about your wellbeing and personal success, we encourage you to ask for help when you notice that academic and non-academic problems are affecting your mental health. To receive professional assistance, please contact someone at **Auburn Cares**. For more information, visit their website at <http://aucares.auburn.edu/>. Also, if there is any additional support you need from us, do not hesitate to ask.

## **Proviso**

Mariane Bacelar may make changes to the syllabus if necessary. All changes will be posted in writing on Canvas.

**SIGNATURE SHEET FOR STUDIES NOT ON SONA**

I certify that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ completed \_\_\_ hours and \_\_\_ minutes of research as a participant on the following date \_\_/\_\_/\_\_\_\_.

Signed\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I certify that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ completed \_\_\_ hours and \_\_\_ minutes of research as a participant on the following date \_\_/\_\_/\_\_\_\_.

Signed\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Signed\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Signed\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_