

Spring, 2012

M. G. Fischman

KINE 3650 (003) – MOTOR LEARNING & PERFORMANCE (4 cr.)

Lecture: Tue., Thur., 8:00 – 9:15 AM (HC 1435)

Lab: Tue, 3:00 – 4:50 PM (HC 1435)

Instructor

Dr. Mark G. Fischman, Motor Behavior Center, 1459 Haley, 844–1465. E-mail: fischmg@auburn.edu
Office hours: M Tu W Th, 2 - 3 PM. Other times by appointment.

Prerequisite

KINE 3020 – Scientific Foundations of Kinesiology

Textbook and Supplies

Rose, D. J., & Christina, R. W. (2006). *A Multilevel Approach to the Study of Motor Control and Learning (2nd ed.)*. For labs, you will need a calculator, stapler, and knowledge of Excel or other graphing program.

Course Description

Study of the processes that influence motor skill learning and performance from a behavioral level of analysis. Addresses the question of how humans learn and control simple and complex movement skills. Understanding the basic psychological processes in learning and control of movement will help teachers and coaches provide better instruction and practice for the motor skills performer. The course also has applications for those who plan to work in rehabilitation, physical therapy, occupational therapy, industry, or military settings.

Course Objectives

Upon completion of this course, students will understand:

1. The characteristics and measurement of motor skills;
2. Theoretical aspects of how the nervous system controls coordinated movement and learning, and limitations built into the system;
3. How a variety of instructional and practice conditions influence the acquisition of motor skills;
4. How individual differences among learners influence motor skill acquisition and performance.

Evaluation

Final Letter Grade

Exam #1	– 15%	90.0 – 100 = A
Exam #2	– 15%	80.0 – 89.9 = B
Exam #3	– 15%	70.0 – 79.9 = C
Final Exam	– 25%	60.0 – 69.9 = D
Lab Work	– 30%	Under 60.0 = F

The first three exams consist of 70% for multiple-choice questions (70 questions) based on lectures, plus 30% for “Test Your Understanding” questions from the textbook (see next page). The final exam is semi-comprehensive, consisting of new material (70 questions) plus 10 repeat questions from each of the three previous exams (100 total questions), plus questions from the textbook.

Lab Reports

Students are **required** to participate in each lab, as most of the labs involve data generated by the students. Lab reports are to be prepared with appropriate analyses, graphs (Excel or other graphing

program), and discussion. Lab instruction sheets will provide details for each lab activity. Lab reports are

due **the Tuesday following the lab class**. Lab reports turned in late will be subject to a 20% penalty.

The

labs will be graded primarily on their completeness, accuracy, and professional presentation. Lab reports must reflect the **individual work of the student**.

Lecture Topic Outline and Schedule

Note. Exam dates are tentative and subject to change at the discretion of the instructor. Advanced notice will be given if there are any changes to the following schedule.

Chapter 1 – Introduction to Motor Control

Chapter 2 – Scientific Measurement and Motor Control

Chapter 6 – Introduction to Motor Learning (only pp. 171-178)

EXAM 1 – February 7 (Tuesday)

Chapter 3 – Somatosensory Contributions to Action

Chapter 4 – Visual and Vestibular System Contributions to Action

Chapter 5 – Developing and Executing a Plan of Action

EXAM 2 – March 6 (Tuesday)

Chapter 6 – Introduction to Motor Learning

Chapter 7 – How Motor Learning is Studied

Chapter 8 – Setting the Stage for Motor Learning

Chapter 12 – Transfer of Learning

EXAM 3 – April 3 (Tuesday)

Chapter 9 – Organizing the Practice Environment

Chapter 10 – Augmented Feedback and Motor Learning

FINAL EXAM – May 2 (Wednesday), 8:00 – 10:30 AM

“Test Your Understanding” Questions for Each Exam - due exam day; worth 30 points on each exam.

These are to be **neatly typed**. Put your name at the top of each page. Number the questions as they are numbered in the textbook. **Please do not staple the pages together**; I will do that at the exam.

Exam 1 (February 7)

Chapter 1, p. 30 (# 1, 4, 6, 7, 8, 10)

Chapter 2, p. 57 (# 2, 4, 6, 8, 10)

Chapter 6, p. 193 (# 3, 4, 5, 7)

Exam 2 (March 6)

Chapter 3, p. 90-91 (# 5, 9, 12, 13, 14)

Chapter 4, p.125 (# 1, 4, 6, 10, 15)

Chapter 5, p. 164 (# 5, 6, 7, 9, 11)

Exam 3 (April 3)

Chapter 6, p. 193 (# 2, 8, 9)

Chapter 7, p. 221-222 (# 1, 6, 9, 10)

Chapter 8, p. 250-251 (# 4, 6, 9, 14)

Chapter 12, p. 389 (# 1, 5, 8, 9)

Final Exam (May 2)

Chapter 9, p. 289-290 (# 3, 4, 7, 11, 12, 13, 15, 18)

Chapter 10, p. 319-320 (# 3, 4, 5, 7, 11, 13, 14)

Lab Schedule

January 17	Lab 1 - Plotting and Graphing Data
January 24	Lab 2 - Error Scores
January 31	Lab 3 - Relationship Between Speed and Accuracy
February 21	Lab 4 - Vision and Proprioception in Catching
February 28	Lab 5 - Reaction Time, Stimulus Modality, and Foreperiod
March 20	Lab 6 - Anticipation Timing
March 27	Lab 7 - Bilateral Transfer
April 17	Lab 8 - Precision of Augmented Feedback

Class Policy Statements

The Tiger Cub no longer exists. General Counsel now maintains a single website that serves as the collection of all University Policies: <https://sites.auburn.edu/admin/universypolicies/default.aspx>. However, below are several policies that are specific to this class:

Unannounced quizzes – There are no unannounced quizzes in this course.

Attendance - For lectures, attendance is optional; there are no penalties for missing lectures. However, I will take roll and if you do not attend, please do not ask me for a recommendation to PT school, OT school, or graduate school. If you miss an exam, legitimate documentation (e.g., medical, court appearance) must be provided and you must make up the exam within 24 hours of returning to class. For labs, attendance is required. If you miss the lab, you may not turn in a lab report.

Plagiarism – Unless explicitly announced by your instructor, there are no group assignments or projects in this course. All exams (including textbook questions), lab reports, and any other written work must reflect the individual efforts of each student.

E-mail - The University has requested that all students use their Auburn University e-mail accounts. This is the most efficient way for instructors to communicate with an entire class, and the University will occasionally send global notices that are important for all students. I request that you check your AU e-mail account regularly.

Cell Phones - As a courtesy to everyone, please turn off your cell phone during class. If you are expecting an emergency call, please let me know at the beginning of class. Also, please do not text-message during class, or use laptops for anything other than looking at the lecture slides.

Disability Accommodations - Students who need accommodations are asked 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 my office hours, an alternate time can be arranged. To set up this meeting, please contact me 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).