

WAYNE STATE  
UNIVERSITY  
COLLEGE OF EDUCATION

**Division:** Kinesiology, Health, and Sport Studies  
**Program Area:** Kinesiology  
**Course #:** 14691  
**Course Title:** KIN 8530 Motor Learning  
**Section #:** 002  
**Term/Year:** Fall 2016  
**Course Location:** 0116 MAIN  
**Day:** Thursday **Time:** 5:30 PM – 8:15 PM  
**Instructor:** Qin Lai, Ph.D.  
**Office Address:** 10 Main Annex  
**Office Hours:** T/Th: 2:30 PM – 5:00 PM  
**Office Phone #:** 313-577-4246  
**e-mail:** qin\_lai@wayne.edu **Website:** <http://coe.wayne.edu/kinesiology/index.php>

**Course Description:**

Examination of current research in motor control and learning. Relation of the nervous system and other physiological mechanisms to motor behavior and other conditions which affect the acquisition of motor skill: perception, motivation, psychology of motor behavior.

**Course Outcomes:**

Upon completion of this course, students should be able to:

1. Demonstrate the acquisition of human nervous system functions on motor behavior.
2. Demonstrate the acquisition of motor control theories and principles.
3. Demonstrate the understanding of human memory and motor learning.
4. Demonstrate the understanding of the variables optimizing motor skill acquisition, retention, and transfer.
5. Demonstrate the skill proposing and designing human motor behavior research.
6. Demonstrate the skill of the computation and presentation of scientific data.
7. Demonstrate the understanding of advanced motor control and learning research literatures.

**Required Text(s):**

Schmidt, R.A., & Lee, T.D. (2011). *Motor control and learning: A behavioral emphasis (5th ed.)*. Champaign, IL: Human Kinetics.

Kandel, E. R., Schwartz, J.H., Jessell, T.M., Siegelbaum, S.A., & Hudspeth, A.J. (2013). *Principles of Neural Science (5th ed.)*. New York: McGraw Hill.

**Additional References:**

Abraham, W.C., & Robins, A. (2005). Memory retention – the synaptic stability versus plasticity dilemma. *Trends in Neuroscience*, 28, 73-78.

Lai, Q., Shea, C.H., Wulf, G., & Wright, D. L. (2000). Optimizing generalized motor program and parameter learning. *Research Quarterly for Exercise and Sport*, 71, 10-24.

Magill, R.A., & Anderson, D. (2014). *Motor learning and control: Concepts and Application 109th ed.*. New York: McGraw Hill.

### Course Assignments:

A lab and a research assignment are required for the class. The lab will involve data collection and analysis at Motor Behavior Lab, 10 Main Annex. The lab will be assessed by participation and report. The research assignment will involve a paper with extensive literature review and verbal presentation on current topics in motor control and learning. The evaluation of the research will focus on the quality and innovation of paper and presentation.

### Course Examinations:

Two exams and two quizzes will be scheduled during the semester. The exams will cover the first half or second half of the materials for the semester, respectively. Each quiz is based on objective questions for selected chapters.

### Class Policy:

All the students are asked to participate in classes. A student will receive a grade of “F” for this class if he/she misses more than 1/3 of the total classes.

All the exams, lab, and quizzes should be attended on time. A make-up can be provided for midterm exam, lab, and quizzes only for emergent situations. In case of emergency, it is the student’s responsibility to contact the instructor immediately to schedule a make-up. . If a student involves university business on the day of exam or quiz, he/she is expected to reschedule the exam or quiz in advance. However, no make-up is available for the final exam.

### Class Schedule:

Date	Content
9/1 Week 1	Class Orientation Chapter 1 Introduction <i>Reading: Ch 1; PNS-Ch1</i>
9/8 Week 2	Chapter 2 Research Methods and Performance Measurements <i>Reading: Ch 2; Shadmehr &amp; Holcomb (1997); Shea, Lai, Black, &amp; Park (2000)</i>
9/15 Week 3	<b>Quiz 1 (Ch. 2)</b> Chapter 3 Human Information Process <i>Reading: Ch 3; Stenekes et al. (2008)</i>
9/22 Week 4	Chapter 4 Attention and Performance <i>Reading: Ch 4; Wulf, et al. (2010); Lohse, et al. (2010)</i>
9/29 Week 5	Chapter 5 Sensory Contributions to Motor Control <i>Reading: Ch 5; PNS-Ch 16</i>
10/6 Week 6	<b>Quiz 2 (Ch. 5)</b> Chapter 6 Central Contributions to Motor Control <i>Reading: Ch 6; PNS-Ch 33</i>

10/13 Week 7	Chapter 7 Motor Learning, Retention, & Transfer <i>Reading: Ch 10 &amp; 14; Lai, et al. (2000); Ausenda &amp; Carnovali (2011)</i>
10/20 Week 8	<b>Midterm Exam (Ch 2-6)</b> Research Assignment Information
10/27 Week 9	<b>Lab</b>
11/3 Week 10	Chapter 8 Conditions of Practice <i>Reading: Ch 11; Mattar &amp; Gribble (2005); Raab, et al. (2005)</i>
11/10 Week 11	Chapter 9 Augmented Feedback <i>Reading: Ch 12; Bruechert, Lai, &amp; Shea (2003); Ranganathan &amp; Newell (2010)</i>
11/17 Week 12	<b>Quiz 3 (Ch. 9) -optional</b> Chapter 10 Learning, Memory, & Posture <i>Reading: PNS-Ch 65 &amp; 41</i>
11/24 Week 13	University Holiday
12/1 Week 14	Student research presentation & discussion
12/8 Week 15	Student research presentation & discussion
12/15 Week 16	<b>Due: Research Assignment and Final Exam (Ch 7-11)</b>

Note: The chapter number on a quiz or exam = the chapter number of the lecture  
The chapter number on the reading = the chapter number of the textbooks

### Grading System:

The following will be used to determine grades in this course:

Midterm	30%
Final	30%
Quizzes (@ 2 x 5%)	10%
Research Paper	20%
Lab	5%
Research Presentation	5%
<b>TOTAL</b>	<b>100%</b>

EXTRA CREDIT: Students who have full class participation will be awarded 2% extra credits.

Grades will be determined on a straight scale:

A = 93 – 100% (4.00)	A- = 90 – 92.9% (3.67)
B+ = 87 – 89.9% (3.33)	B = 83 – 86.9% (3.00)
B- = 80 – 82.9% (2.67)	C+ = 77 – 79.9% (2.33)
C = 73 – 76.9% (2.00)	
F < 70% (0.00)	

### **ACADEMIC DISHONESTY – PLAGIARISM AND CHEATING:**

The College of Education has a “zero tolerance” approach to plagiarism and other forms of academic dishonesty. Plagiarism includes copying material (any more than 5 consecutive words) from outside texts or presenting outside information as if it were your own by not crediting authors through citations. It can be deliberate or unintended. Specific examples of academic dishonesty, including what constitutes plagiarism, can be found in the University’s Undergraduate Bulletin (<http://bulletins.wayne.edu/ubk-output/index.html>), the Undergraduate Student Handbook (<http://comm.wayne.edu/files/undergradhandbook.pdf>), and in print and online versions of the Graduate Catalog (<http://www.bulletins.wayne.edu/gbk-output/index.html>) under the heading “Student Ethics.” **It is every student’s responsibility to read these documents to be aware which actions are defined as plagiarism and academic dishonesty.** Sanctions could include failure in the course involved, probation and expulsion, so students are advised to think carefully and thoroughly, ask for help from instructors if it is needed, and make smart decisions about their academic work.

Academic misbehavior means any activity that tends to compromise the academic integrity of the institution or subvert the education process. All forms of academic misbehavior are prohibited at Wayne State University, as outlined in the Student Code of Conduct (<http://www.doso.wayne.edu/student-conduct-services.html>). Students who commit or assist in committing dishonest acts are subject to downgrading (to a failing grade for the test, paper, or other course-related activity in question, or for the entire course) and/or additional sanctions as described in the Student Code of Conduct.

- **Cheating:** Intentionally using or attempting to use, or intentionally providing or attempting to provide, unauthorized materials, information or assistance in any academic exercise. Examples include: (a) copying from another student’s test paper; (b) allowing another student to copy from a test paper; (c) using unauthorized material such as a "cheat sheet" during an exam.
- **Fabrication:** Intentional and unauthorized falsification of any information or citation. Examples include: (a) citation of information not taken from the source indicated; (b) listing sources in a bibliography not used in a research paper.
- **Plagiarism:** To take and use another’s words or ideas as one’s own. Examples include: (a) failure to use appropriate referencing when using the words or ideas of other persons; (b) altering the language, paraphrasing, omitting, rearranging, or forming new combinations of words in an attempt to make the thoughts of another appear as your own.
- **Other** forms of academic misbehavior include, but are not limited to: (a) unauthorized use of resources, or any attempt to limit another student’s access to educational resources, or any attempt to alter equipment so as to lead to an incorrect answer for subsequent users; (b) enlisting the assistance of a substitute in the taking of examinations; (c) violating course rules as defined in the course syllabus or other written information provided to the student; (d) selling, buying or stealing all or part of an un-administered test or answers to the test; (e) changing or altering a grade on a test or other academic grade records.

Anyone with specific questions regarding academic misbehavior should consult the Student

Conduct Services website at <http://www.doso.wayne.edu/codeofconduct.pdf> or [http://www.doso.wayne.edu/student-conduct/Academic\\_Integrity.html](http://www.doso.wayne.edu/student-conduct/Academic_Integrity.html)

### **GENERAL NOTE ON GRADING:**

The College of Education faculty members strive to implement assessment measures that reflect a variety of strategies in order to evaluate a student's performance in a course. For undergraduates and post-degree students C grades will be awarded for satisfactory work that satisfies all course requirements; B grades will be awarded for very good work, and A grades will be reserved for outstanding performance. [For graduate students B grades will be awarded for satisfactory work that satisfies all course requirements; B+ grades will be awarded for very good work, and A grades will be reserved for outstanding performance.] Please note that there is a distribution of grades from A-F within the College of Education and '+' and '-' are recorded and used to distinguish grade point averages.

### **MEDICAL WITHDRAWAL:**

A student who sustains, during the course of the semester, an injury or illness that prevents him/her from further participation in this class may apply for a "(partial) medical withdrawal" and *may* receive complete or partial reimbursement of tuition paid for this class. A physician's statement is required. Forms to use to apply for "medical withdrawal" may be obtained from the Registrar, or from [www.wayne.edu](http://www.wayne.edu) (type in "forms and instructions" in the search box).

### **ENROLLMENT/WITHDRAWAL POLICY:**

In the first two weeks of the (full) term, students can drop this class and receive 100% tuition and course fee cancellation. After the end of the second week there is no tuition or fee cancellation.

Students who wish to withdraw from the class can initiate a withdrawal request on Pipeline.

You will receive a transcript notation of WP (passing), WF (failing), or WN (no graded work) at the time of withdrawal. No withdrawals can be initiated after the end of the tenth week. Students enrolled in the 10th week and beyond will receive a grade. **Because withdrawing from courses may have negative academic and financial consequences, students considering course withdrawal should make sure they fully understand all the consequences before taking this step. More information on this can be found at:**

**[http://reg.wayne.edu/Withdrawing\\_From\\_a\\_Course.php](http://reg.wayne.edu/Withdrawing_From_a_Course.php)**

**FINAL DATE FOR STUDENTS TO INITIATE WITHDRAWAL IS SUNDAY, NOVEMBER 13, 2016.**

### **"I" - INCOMPLETE**

The mark of "I" (Incomplete) is given to a student when s/he has not completed all of the course work as planned for the term and when there is, in the judgment of the instructor, a reasonable probability that the student will complete the course successfully without again attending regular class sessions.

University grading policy states that a written contract should be signed by the student and instructor, specifying all work to be completed. In order to alleviate questions about incomplete courses and to assist students and instructors, the Office of the Registrar has prepared a template Contract for Completion of Incomplete Coursework. You can find the template contract at <http://reg.wayne.edu/pdf-forms/incomplete.pdf>. **Incompletes are not granted for students that**

**have not attended, missing several assignments, missed exams, or failing the course.**

### **STUDENT DISABILITIES SERVICES:**

If you have a documented disability that requires accommodations, you will need to register with Student Disability Services for coordination of your academic accommodations. The Student Disability Services (SDS) office is located in the Adamany Undergraduate Library. The SDS telephone number is 313-577-1851 or 313-202-4216 (Videophone use only). Once your accommodation is in place, someone can meet with you privately to discuss your special needs.

Student Disability Services' mission is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at Wayne State University.

Students who are registered with Student Disability Services and who are eligible for alternate testing accommodations such as extended test time and/or a distraction-reduced environment should present the required test permit to the professor at least one week in advance of the exam. Federal law requires that a student registered with SDS is entitled to the reasonable accommodations specified in the student's accommodation letter, which might include allowing the student to take the final exam on a day different than the rest of the class.

### **RELIGIOUS OBSERVANCE POLICY:**

Because of the extraordinary variety of religious affiliations of the University student body and staff, the Academic Calendar makes no provisions for religious holidays. However, it is University policy to respect the faith and religious obligations of the individual. Students with classes or examinations that conflict with their religious observances are expected to notify their instructors well in advance so that mutually agreeable alternatives may be worked out.

### **STUDENT SERVICES:**

The Academic Success Center (1600 Undergraduate Library) assists students with content in select courses and in strengthening study skills. Visit [www.success.wayne.edu](http://www.success.wayne.edu) for schedules and information on study skills workshops, tutoring and supplemental instruction (primarily in 1000 and 2000 level courses).

The Writing Center is located on the 2nd floor of the Undergraduate Library and provides individual tutoring consultations free of charge. Visit <http://clasweb.clas.wayne.edu/writing> to obtain information on tutors, appointments, and the type of help they can provide.