

San José State University
CHHS/Kinesiology
KIN 166-06, Motor Learning, Spring, 2021

Course and Contact Information

Instructor:	Masaaki Tsuruike, PhD, ATC
Office Location:	SPX 173H
Telephone:	(408) 924-3040
Email:	masaaki.tsuruike@sjsu.edu
Office Hours:	Mon and Wed: 1:00 - 2:00 PM
Class Days/Time:	Synchronous in class (online) Mon and Wed 9:30-10:20 AM Laboratory Section 7, Mon 10:30 AM - 12:20 PM Laboratory Section 8, Wed 10:30 AM - 12:20 PM
Classroom:	Fully Virtual Class with Synchronous Component (On Line)
Prerequisites:	KIN 070 for major/minors only or instructor consent; BIOL 066 with a grade of 'C-' or better

Course Format

Course materials, such as syllabus, handouts, notes, assignment instructions, etc. can be found on the Canvas learning management system used at SJSU. You are responsible for changing the settings so that e-mail that is sent to your Canvas account is forwarded to your regularly used email account. Announcements will be posted on Canvas and should be checked on a regular basis; students may choose to be alerted via text or email that announcements have been made.

Course Description

This course covers: concepts, principles, and theories of motor learning with application to movement and physical activity. Kin 166 introduces concepts of learning, remembering, and performing of motor skills.

Kinesiology Undergraduate Program Learning Outcomes (UPLO)

(Key principles: critical understanding and application of research and scholarship in the field of kinesiology; communication skills; movement competence; sustainability; diversity and social justice) Upon completion of a Bachelor of Science degree program in the Department of Kinesiology students will be able to:

- Explain, identify, and/or demonstrate the theoretical and/or scientific principles that can be used to address issues or problems in the sub-disciplines in kinesiology (UPLO1)
- Effectively communicate in writing (clear, concise and coherent) on topics in kinesiology (UPLO2)

- Effectively communicate through an oral presentation (clear, concise and coherent) on topics in kinesiology (UPLO3)
- Utilize their experiences across a variety of health related and skill-based activities to inform their scholarship and practice in the sub disciplines in kinesiology (PLO4)
- Identify and analyze social justice and equity issues related to kinesiology for diverse populations (UPLO5)

Course Learning Outcomes (CLO)

Upon successful completion of this course, students will be able to:

- Explain in writing on a narrowly focused and significant topic identified in the scholarly discipline of motor learning (CLO1)
 - Specifically, this outcome will be met through the development of an essay integrating primary and scholarly source materials to provide a deep understanding of the complexity of human performance and information processing. Through critical analyses and interpretation strategies you will learn to recognize theoretical and scientific knowledge in the motor learning literature.
- Explain orally on a focus related to a significant topic narrowly identified in the scholarly discipline of motor learning (CLO2)
 - Specifically, this outcome will be met through the group presentation made on the day of lab class; as well, oral contributions will be required throughout group activities.
- Solve hypothetical problems by making applications of motor learning theoretical and empirical knowledge to practice as teachers, developers, managers, and rehabilitation specialists (CLO3)
 - Specifically, this outcome will be demonstrated by responding to reflective items presented each week in the Motor Learning Laboratory Works and through the lab weekly assignments. These items will be discussed during each laboratory session. The final lab work will be measured at the end of the semester. Feedback will be provided each week on short assignments assigned during the lab session and due by the opening of lab in the following week.
- Describe concepts, principles and theories of motor learning in the context of kinesiology (CLO4)
 - Specifically, two regularly scheduled exams will measure through writing assignments your understanding of motor learning concepts, principles, and theories. Further, reflections required in the Motor Learning Lab Works are expected to assist students' integration of motor learning into the field of kinesiology.
- Explain how recognizing bias in science is a form of social justice (CLO5)
 - Specifically, the idea of social justice will be measured by an item on one of two exams.
- Demonstrate use of technology integrated into motor learning (CLO6)
 - Specifically, this outcome will be met by activities where you will be asked to use scholarly information found by searching in the scholarly databases; as well you will be asked to use computers of some type during every session of the laboratory to conduct, analyze, and present results of scientific data.

Required Readings

Textbook

Magill, R., & Anderson, D. (2021). *Motor Learning and Control. Concepts and Applications* (12th Edition). NY: McGraw Hill. ISBN 9781260240702.

Course Requirements and Assignments

SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five (45) hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in [University Policy S12-3](http://www.sjsu.edu/senate/docs/S12-3.pdf) at <http://www.sjsu.edu/senate/docs/S12-3.pdf>.

Each student will be required to the following activities:

1. Exam 1
2. Exam 2
3. Laboratory Grade (includes Motor Learning Laboratory Works)
 - 1) Submission of weekly lab assignments
 - 2) Submission of lab works
 - 3) Presentation of group project

Grading Information

- Exam 1: 30%
- Exam 2: 30%
- Lab Assignments: 40%

Determination of Grades

The course is based on a percentage scale (100%). The breakdown is as follows:

A+: 100-97	A: 96.99-93%	A-: 92.99-90%	
B+: 89.99-87%	B: 86.99-83%	B-: 82.99-80%	
C+: 79.99-77%	C: 76.99-73%	C-: 72.99-70%	
D+: 69.99-67%	D: 66.99-63%	D-: 62.99-60%	F: <59.99%

Exams: March 17, Wednesday

Exams include content discussed in class, on-line, in textbook and other assigned readings (such as discussion threads) and from the motor learning laboratories. Exams consist of essay items testing your motor learning knowledge. Exams 1 will be constructed to test short term information, while the final examination will be constructed to be comprehensive. The first exam will be administered during the time of the regularly scheduled 50-minute lecture class. **The final examination will be administered through Canvas according to the university Schedule of Classes for Friday, May 21 from 7:15 am-9:30 am** (please see final exam schedule at this link here <https://www.sjsu.edu/classes/final-exam-schedule/spring-2021.php> and mark your calendars accordingly). No exceptions will be made from taking exams on the assigned test dates. Times and dates will be changed only for serious and compelling reasons.

Lab Assignments:

A completed electronic Motor Learning Laboratory is required due on May 12, 2021 no later than 11:59 pm. Completed means you have responded to all parts of the lab for each week, including: the responses to questions, data, charts, and reflections. You are expected to participate regularly in laboratories on the day assigned by the schedule of classes. Lab reflections will be assigned each week but should also be accumulated in the Motor Learning Lab Works and submitted at the end of the semester. Late Motor Learning Lab Works will not be accepted except for serious and compelling reasons. Within each lab

section students will be assigned to a lab group for working cooperatively throughout the semester; as well, the group will create a project and an oral presentation on a topic assigned by the instructor. Technology is required for the presentation. Groups will be assigned; groups may communicate virtually through Google docs, Zoom, and in person to complete group assignments. A draft of the grading rubric for the Motor Learning Lab Works is available at the end of the electronic shell provided.

Final Declaration

All exams must be taken, and all assignments must be submitted; a missing exam or lab works will result in 0 points for that assignment. An in class final exam will be given on **Friday, May21 from 7:15 am to 9:30 am.** Please organize your calendars now.

Make-up exams are permitted only for illness and emergency. The student is responsible for notifying the instructor at the earliest possible time. In most cases, exams must be completed before the next class meeting. All requests for make-up exams will be evaluated on an individual basis.

Library Liaison

Adriana Poo is our library liaison. She can be reached at: Adriana.poo@sjsu.edu or by phone (408) 808-2019.

Classroom Protocol

Students are expected to be courteous during class. Any student engaging in disruptive behavior will be asked to leave the Zoom. This includes regularly arriving more than 10 minutes late to lecture and lab classes. The use of anything that beeps or vibrates during class is disruptive and will not be tolerated. Please silence your phone. If you are caught using a phone for unrelated activities (even silently, e.g., texting, shopping), you may be asked to leave the classroom.

University Policies (Required)

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>

Calendar

Assignments and readings are due on the day assigned according to the calendar presented here. Any changes will be determined by class discussion and reflected on updated versions made available through Canvas. Pop quizzes are not announced on the schedule. White (or no) shading means the lecture class is online; blue shading means the lecture class is live and then posted as a recording.

KIN 271, Advanced Topics in Athletic Training, Fall, 2019

Tentative Course Schedule (Subject to change with advance notice)

Week	Date	Topics	Reading
1	January 27	Introduction to Motor Learning	
2	February 1	The Classification of Motor Skills Gross vs fine motor skills Continuous vs discrete motor skills Open vs Closed motor skills	Chapter 1
	February 3	Gentile's Taxonomy of Motor Skills Regulatory vs nonregulatory conditions	Chapter 1
3	February 8	Gentile's Taxonomy of Motor Skills	Chapter 1
	February 10	The Measurement of Motor Performance Reaction, movement, and response time Error measures	Chapter 2
4	February 15	The Measurement of Motor Performance Electromyography Kinematic measures	Chapter 2
	February 17	Motor Abilities General vs specificity of motor ability Balance Perceptual motor abilities and physical proficiency ability	Chapter 3
5	February 22	Neuromotor Basis for Motor Control The central nervous system The cerebral cortex The primary, premotor, supplementary motor area Parietal lobe The diencephalon Cerebellum Brainstem The limbic system	Chapter 4
	February 24	Neuromotor Basis for Motor Control Spinal cord composition The motor unit The neural control of voluntary movement	Chapter 4
6	March 1	Motor Control Theories Open- and closed-loop control system	Chapter 5
	March 3	Motor Control Theories Motor program vs generalized motor program Schmidt's schema theory	Chapter 5
7	March 8	Sensory Components of Motor Control Proprioception and motor control	Chapter 6
	March 10	Sensory Components of Motor Control Vision and motor control	Chapter 6

Week	Date	Topics	Reading
		Central and peripheral vision Two visual systems for motor control	
8	March 15	Review for Exam 1	
	March 17	Exam 1	
9	March 22	Performance and Motor Control Characteristics of Functional Skills Fitts' law Prehension Vision of the object and catching Tau and catching Locomotion	Chapter 7
	March 24	Action Preparation Movement complexity Postural preparation	Chapter 8
	March 29	Spring Recess	
	March 31	Spring Recess	
10	April 5	Attention and Memory Central-resource capacity theories Kahneman's attention theory Multiple-resource theories	Chapter 9
	April 7	Attention and Memory Focusing attention Visual search and motor skill performance	Chapter 9
11	April 12	Memory Components, Forgetting, and Strategies Working memory Long-term memory	Chapter 10
	April 14	Memory Components, Forgetting, and Strategies The causes of forgetting Strategies that enhance memory performance	Chapter 10
12	April 19	Defining and Assessing Learning Improvement, consistency, stability, persistence, adaptability	Chapter 11
	April 21	The Stages of Learning Bernstein's description of the learning process	Chapter 12
13	April 26	Transfer of Learning Positive vs negative transfer	Chapter 13
	April 28	Transfer of Learning Bilateral transfer Symmetric vs asymmetric transfer	Chapter 13
14	May 3	Demonstration and Verbal Instructions	Chapter 14
	May 5	Augmented Feedback	Chapter 15
15	May 10	Practice Variability and Specificity	Chapter 16

Week	Date	Topics	Reading
	May 12	Whole and Part Practice	Chapter 18
16	May 17	Wrap up – Review for Final Exam	
Final Exam	May 21	<i>Final Exam 7:15-9:30 AM</i>	